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Glafs, Stones and Menals; The Versilian crisis, Stones and rectain 1 file / ring thereof, according to any purpose of learning and Beautiping of the Face, Deltrius of Persons (Incres publishes the Original, Advantables and Person And a Diffcourse of Perspective. Chi And a Diffourie of Peripetive. Chiral Te which also is added.

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ondon, Printed for Thomas Paffinger at the Bree Bridge; and Thomas Sawbridge Arthe Three Fl Little-Brittain. M DC LXXXV.

# POLYCLAPRICE:

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#### The Epiflle Dedicatory.

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To his much Honoured and Re freder Friend Captain Wortley Whorwood, of Demon in the County of Rent, Elquire, one of his Majelties Julices of the Reace for the farme of cefius lived, (as is reported), a wisneyand

Kars ; and Flandel a poor Scriuse 1 & Sother Arth of Printing thing of ald which Princes admired, Kings did effect, Emperors and Noblemen in almost all Ages did hove and make use of, sa the more noble and bravest Personages of all Ranks and Degrees, were constantly taken with it.

And as I am fully faturfied, that your suriofity has lead you to the knowledg of the most rechife Mysteries of thate Arts, and made you a great Judge of things of this nature : 19 1 could not have obofe a more fit or accomplished

#### The Epistle Dedicatory.

Patron; and therefore do request your acceptance hereof as one Favour more, to be added to those many, which for several years you have been pleased to oblige your poor Friend, withal.

Here are force Traffs of Alchyony in this Book, and the very process it self (as it is believed) by which the Masters of that learning, attained to the summ of all their Glory. In the perfection thereof, there are Riches, Honour, Idealth and long Life: By it Artefius lived, (as is reported) a thousand Years; and Flamel a poor Scriviner built twenty eight Hospitals in France, with divers Churches and Chappels, endowing them all with large Revenues.

It is Honour, as Oicero Sath, which gives Behig, Life and Nourishment to Arts, and it is the same in your worthy self, which indulges the Patronage of these Lines. Pressuming therefore of that affection which lodges in your Breast; I have made bold to shelter it under your Honoured Name, lexibility to see it, either live in your estimation, or perish in your distinct.

#### The Epiftle Dedicatory.

If it obtains but so much as your teast approbation, I have my End, and therein shall account my Endeavours fortunate, and my self happy; and shall hope, That with your Name and Memory, this Work may

be consecrated to Eternity.

God Almighty has given you largely the Blessings of this Life, and dealt very bountifully his Favours unto you; causing your Lot to fall in good Ground, and making your Cup to overflow; may his merciful Hand continue the same with a perpetual increase of his Bounties, and give you at length the fruition of a happy immortality in his Eternal Kingdom: These are the Prayers of,

SIR,

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If

your most humble and Faithful Servant,

William Salmon.

A3 THE

The Epiffle Dedicatory.

If it obtains but so much as your least approbation, I have my Lad, and therein fiell account my Endeavours fortimate, and my felf bappy; and flatt bee, That with your Name out Meniory , this Work may be consecrated to Eternity.

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never be able to judge enight: For to him that already underflands it, the labour would lets and fuperfluous: and to the average ignorant, it would be the putting a level into a Swines Snout the exquisite knowledge of which is impossible ever to be attained or ny already; and its ufefulasis as apparent as it se excellent: To enumerage the one, or rei mil a moder Work is the Art of Painting: , activity and too the to been by the been to been to been to the been to be min amitto express what is here intended thereby: For we do not early comress that Art has it is generally received but allo Drawing, Engraving of Enthing williaming, Walking Colouring and Dring All which boing confidered in their proper extent, infinite ly exceed that curtail'd hame of Pointing: which that we might joyn all in one proper and comprehensive Word we made

30

171

253

3

GRAPHICE.

II. To persuade any one to the Study or Practice of this Art, would be a great folly; fince Ignerance (which is always blind) can

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never be able to judge aright: For to him that already understands it, the labour would be useless and unprofitable; to him which is already delighted therein, it would be needless and superstuous; and to the averse and ignorant, it would be the putting a Jewel into a Swines Snout! the exquisite knowledg of which, is impossible ever to be attained or understood, by such prejudicate and cloudy Souls, although it is sufficiently known to many already; and its usefulness as apparent as it is excellent: To enumerate the one, or rehearse the other, it is but to persuade the World. That it is day-light, when he Sun is upon the Meridian y or at least to inculcate, an ignorance of those things, which have been manifestly known even a long time since.

III. The method of this work is wholy new, wherein we have united and made one, fuch various subjects as have been the uncertain, obficure and redious Discourse of a great number of various and large Volumes. What shall me far? Things far as under, we have laid together: things uncertain, are here limited and veduced: things obscure, we have made short things erroneous, we have retissed and corrected: things thard, no have made facil and easie: things thard, no have collected: things (in appearance) hereogene, we have made homogene

homogene: And in a word, the whole Are me have reduced to certain Heads: brought under a certain method, limited to practical Rules; and made it perspicuous, even to a

very mean understanding.

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IV. In the Composure of this Work Ches fides our own Observations ) we have made use of the best Authors now extent, that we could peffibly procure, or get into our Hands; wherein our labour was not finall so what in Reading, Comparing, Transcribing, Choofing, Correcting Disposing and Revising every thing in respect of Matter Form and Orders (The which had we any President to have followed, any Park to have traced, any Example to have imitated, any Help to have confulted, or any Subject entire: Or otherwise, had the Number of our Authors been small, their Maxims truths, their Rules certain, their Meanings not obscure, or their Precepts been reduced to Method and Order, We might no only, with much more case, pleasure and certainty; les labour, trouble and pains; gres ter perspicuity, plainness and singularity; better order, method and language; but also in (borter time have brought to perfection, what we here prefent you withal,

V. In the first five Books of this fifth Edition, we have inserted above a thousand seyeral Additions of singular use to the matther without them they might really be accounted Defetive. There is the various depictings of the Antients, according to the customes of several Nations, drawn from the best, most experienced and highfullest Authors, whether English, Italian of Lain: various ways of Painting, Beautifying and Adorning the Face and Skin, so attificial as in shally be imperceptible to the scrutiny of the most surious and pierceing Eye. To which is also added (as a necessary Appendict) thought a dearcement and Perfection of these lates, together with a short Introduction into the profound Mysteries of Alchymy and Chiromancy.

fine of young Artists, we have in a fixth Book, given you a Translation out of Latin, of the one hundred and twelve Artistums of Perrus Johannes Faber, a most learned and famous Physician of Mompelier in France, and a very great Christis and Alchymist. They have been carriedly fought for by many in genious Gentlemen, but by reason of the fourteness and great price of the Book, they were not easie to be had; and being also in Latin, not to be understood by every one who

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who had a curiofity that way. For their Reafors we took the pains of translating the Sinding of the matter, have carefully claused exchipericular, that the fende of the Author hight the better be apprehended. But truly meda Chois or Key to unlock them, that their meaning and intention might be under-Aded and put Key, it is faid, will unfold ment in rescept two of them, whole mean-My and metroretation is according to their lior Anding our thois two sprideled Areanums wes mals have to the foruing of the Indu-Alvers Stildent, who may at one time or select be at the meet with that unlooks the analyment of, which is by many fo much defired, and which peradventure by the same Hand might have otherwise been perpetually fought for in vain

VII. Lastly, Having a small Medical Manuscript by me (being a choice collection of several excellent and specifick Medicaments) we could not but (at the request of some worthy persons) befriend the World with the same. They are all of them Medicines which we daily use in our practice, and have had Experience of, now, for more than one and twenty years: we recommend them to the

#### The Preface.

the Publick, most of them, after more than a thousand Tryals; nor in the ordinary Practice is there any other Remedies of greater Vertues and Effects. These you may use fasely, and in small Doles, with a certain suppetiation of success, which is for the most part as stupendious as it is admirable. I could write much in their commendation, but I need not, for their own worth will extol them be word all that I can possibly say, in For this cause sake I have been large in their Virtues, exact in their Doles, and very plain in the way or manner of exhibition, so that any one of an ordinary capacity, may adventure to give them, though no Physician be prosent. These for the publick good we have freely communicated to the World; it now remains that we humbly pay our asknowledgments to Heaven.

From my Honfe at the blevy
Balcony by Fleet Disch,
The sear Holbern Bridge, London, March 30. 1685

William Salmon.

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# CONTEN

# BOOK I.

#### Of DRAWING.

CHAP	Pag.
I. OF Polygraphice in general.	. 1
2. Of the Instruments of Drawing.	3
3. Of the Precepts of Drawing in general.	8
4. Of particular observations in Drawing.	11
5. Of the imitation of the Life.	16
6. Of the imitation of Draughts.	20
7. Of drawing the Face of a Man	32
8. Of drawing the extream Parts	25
9. Of drawing the whole Body	26
10. Of drawing a naked Body	28
11. Of shadowing a naked Body	30
12. The way and manner of Shadowing	31
13. Of expressing Passions in the Countenance	33
14. Of Human Proportion	35
15. Of Dragery	
	16. OF

CHAF		Page
	ixed and uncertain Forms	48
17. Of I	andskips	50
18. OF I	hispering and Antique	53
19. To ta	ke the perfect draught of any P	
20. To	extend or contract a Picture,	keeping the same
	reportion	56
	erspective in general	56
22. Of M	oattive part of Penfpettive	58
22 Of the	Subjett to be feen	1
24 The	eneral practice of Perspective	1 62
quine		The same of the sa
	1 200	11
	The second secon	
	7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	The second second second
	Britanis 10	***
	- was a way of the	
* 37 A		CHAP
*	aplice costs.	W. 1
	Hold want of Dramers	0 2 0
	12 el 1 de la 12 del 12 de la	E. Office Percent
	Butter puranted to fee	BOOK
9.1.	and the state of	tation of the instant
	the state of the s	of the content of
	WALLES STATE	" Of crapius
	and a contract of the contract	0. Of James
2.5	- Child States and	Andrewski 10 0
	o a naked bony	10 of
1	the a surfed Body	of haden

# BOOK

brd

# Of Engraving, Etching and Limning.

	- 430
CHAP. gireland onen particularly grinning	老
L F Grazino, and the Inframente thereof	67
2. Of poliffeing the copper Plates with the	69
3 Of holding the Grover sold of sound for	70
4 Of the way and manuser of Engreeving	Zŧ
S. Of the imitation of Copies on Prieston I want to	
	X
6. Of engraving in Wood, or Carring to grand to	23
7. Of Etching, and the Instrument thereof will to	25
8. The way and manner of using the hard Varnish 10	86
The way and manner of Exching want start of	18
no. Of using the Aqua Fortis	86
11. Of finishing the work want to gui which to	.32
12. The way of using the fost Varnish ?	29
13. The way of Etching upon the soft Varnish	90
14. Of using the Aqua Fortis and finishing the Hone	.91
15 Of Limning and the Material street	1
15. Of Limning and the Materials obereof	94
16. Of the Gums and their use	95
17. Of the seven Colours in general	9#
18. Of Colours in particular	.99
19. Of mixt and compound Colours	104
20. Of Colours for Drapery	108
21. Of liquid Gold and Silver	110
22. Of preparing the Colours	113
23. Of the manual Instruments	117
	. 0

CHAP.		Pag.
24. Of preparations for	Limning -	119
25. Of the practice of I		or drawing
a Face in mater Co	olours -	122
26. Of limning Drapery	a U U a	125
27. Of limning Landski		132
28. Of Light and Shado	שנו	134
29. Of Colours more par		140
39. Observations of make	ing Some Colours	141
31. The fam of the obse	ervations of limning to	the Life in
general .		. 143
32. Of limning Landskip	ps more particularly	. Inist
33. Of the various forms		3 4 455
34. Of limning the Shie	, Clouds, &cc.	157
35. Of limning Towns,	Castles and Ruines	158
36. Of Mountaine, Hill		159
37. Of Trees, Bonghs,		160
38. Of colouring of make		161
39. Of colouring of Hair	iness and the left com	162
40. Of Walts, Chamber	s, and the like	163
41. Of marble Pillars,	Rocks, and the like	164
42. Of colouring Metals	g to Aqua Lorus	ala Cibid.
43. Of colouring of Flow	ers Asha on I grand	165
44. Of Radishes, Turney	ps, Melons, Cucumber	
	oft roda balenty je kee	166
49. How to colour Fruits	W. Old Tilburger Sc	167
46. Of limning of Fowls	mining and the Mano in	169
47. Of limning of Beasts	c Grant and shelp refer	170
48. Of timning of Serpen	nts. I sign at transport normal a	173
9. Of limning of Waters	and Folh	ibid.
	st and co <b>mpours</b> Colon longs for <b>Draper</b> a	19. 01 m
(31)		
11	ma Gold and Sitter	The second second
	sparing the Columbs commend definances	
		100
0.12	В	OOK

# BOOK III

# Of PAINTING, WASHING, COLOURING, Dying, Varnishing and Garages:

CHAP.	Pag.
F Painting in general	IU TO TE
2. Of painting we only and the mater	tals there-
of Papers Inchoran and I coher, Sec. 221	179
3. Of Colours in general and their Signification	180
A Of the fitting of Colours for Parming	182 W 182
5. Of Colours for Velver	183
6. Of Colours for Sattins	185
7. Of Colours for Taffany, Cloth and Learber	186
8. Of Colours for Garments in general.	186 CONTA
9. Of Colours for Metals and precious Stones	188
10. Of Colours for Landskip	189
11. Of the painting of the Face	190
12. Of the cleansing of any old Painting	192
13. Of a Picture in general	ibid.
14. Of the choice of Copies or Patterns	195
15. Of the disposing of Pictures and Paintings	196
16. Of Fresco or painting of Walls, Sundials, Tim	b.&c.198
17. Of Colours for painting Glass	199
18. Of the may of painting upon Glass	201
19. Of Washing and the materials thereof	202
20. Of Colours simple for washing of Maps	204
21. Of Colours compound for washing of Maps	209
(a)	22. Of

CHAP.	Pag.
22. Of mixing Colours and shadowing	231
23. Of Colours for washing Landskips	213
24. Of the practice of Washing	215
25. Of the making of Varnishes	218
26. Of the manner of Varnishing	222
27. Experimental observations of vegetable Colours	in ge-
neral	224
28. General experimental observations of mineral C	olours
	229
29. Of Metals	233
30. Of the Instruments and materials of Casting	255
31. The way and manner of Casting	257
32. Of Glass and precious Stones	259
33. The way and manner of Gilding	267
34. Dying of Paper, Parchment and Leather, &c.	271
35. Dying of Wood, Horns and Bones, &c.	275
36. Of dying Yarn, linnen-Cloth, &c.	278
37. Of dying Stuffs, Cloaths and Silks.	280
38. Of Wax work, or moulding	285
39. Of the performing Mezo-tinto	288
40. Containing certain natural Experiments	289
Character Company (1997)	10.6

BOOK.

# BOOK IV.

Containing the Original, Advancement and Perfection of the Art of PAINTING: Particularly exemplified in the various Paintings of the Antients.

Pag.
301
7 309
uing,320
of Sa-
332
334
337
338
341
342
344
347
348
349
351
Sea Gods
352
354
17. How

CHAP.	Pag.
17. How the Antients depicted Pan	355
18. How the Antients depicted Pluto	356
19. How the Annients depicted the Parae or Shers	357
20. How the Antients depicted Minerva or Pallas	358
21. How the Antients depisted Vulcan	
	359
22. How the Antients depicted Bacchus	360
23. How the Antients depicted Fortune	367
24. Flow Verthe, Truth, Prace, Hondar, Flatte at	
no mentwere depitted not forto lone on	3/05
25. How Night, Sleep, Silence, Pleasure and Fea	r mere
depicted 1929 VII atti Strik 1 . Online	367
26. How the Antients depitted several wife Men an	d Phi-
losophers, Langivers, Emperors, Kings & Queen	\$ 369
losophers, Langivers, Emperors, Kings & Queen 27. The painting of the Sibyls	
28. The painting of Arts. Vertues, Pallions. & minor Go	ds 272
29. To express the Powers and to language and T	
26 Of Vertues and Vices 3/241 to langum out 1	375
36. Of Vertues and Vices 37. Of Rivers 32. Of Numbes	379
confunction or revision of the Arrof Painted 220	385
32. Of tomphi	
33. Of the nine Mufes	387
34. Of the four Winds	369
34. Of the four Winds 35. Of the swelve Months of the Tear	389
the Antens deposited Photobus at Sol. 238	dold.
the Antients of the Venus ,	mort.
TAS I STATE A WAS A PROPERTY AND	mary 6

14. Fine the Anterior depoted Neptune of Manager of BOOK
16. This the Antients depitted Neptune of the Control of the Control

The the Aprilate depicted in no

16. Of making Powerders for Bracelets

192

433 +3.+ 430

442

# Bond Hat Had State of the Strate of the Stra

443		cloves	449	·	* 100 mg	30	
744		Ink	Corts of	LEPTE	making	30 .:	**
CA'm T	dea of	the A	TIS O	f Be	ATT	WN	G.
1745			Pearl	orificia	Bullening	10	
tills in	B ETHE	100 -	TICH	TAX	and it	HIR	O.

? MANCY.	1 1020	general.	
478	or Lead.	er. of Sauntin	
		. S. Of Juniter	
CHAP.	\$1.00° )	of Mars or	
F painting the I	ace and Skin	25 of Sol of G	2
2. Of Colmet	icks which bear	tifia mithout an	7
thing of			
3. Of Cosmeticks which	remedy the quari	BUNDAN TO 329	
Chin a	sement the Mais		
Skin	si sindacialida a	arg site 10 494	•
4. Of making a Sweet Br	eath weekomen	weithe 19 40	)
5. Of beautifying the Ha	air	411	ı
6. Of the Art of Perfum	ing in general	41	3
7. Of the matter of which	ch Perfumes are	made 414	
8. Of the Oyl of Ben	14	415	٠.
9. Of Sweet Waters	the second to a second	410	
19. Of perfuming Oyls a	ad Spirite		
Of and Till	To all the sales	10/1 2/1 3 4/5	
11. Of perfuming Esfence	the median to the	17 531 10 421	
12. Of perfuming Ungue	ML	424	ŀ
13. Of perfuming Powder		425	,
14 Of perfuming Balfan	ns	429	)
15. Of perfuming Tables	5	430	
100	(43)	16 0	

CHAP.	Pa
16. Of making Pomanders for Brace	elets 43
17. Of perfuming Washbals	43
18. Of perfuming Soaps	43
19. Of burning and boyling Perfume,	43
20. Of animal and mineral Reviews	(1) (1) 44
21. Of the adulteration of Musk,	Civet and Ambergri
	44
22. Of perfuming Cloth, Skins, Gi	loves, &c. 44
23. Of making various forts of Ink	44
24. Of making Sealing Was and G	lens to sol 44
25. Of making artificial Pearls	45
26. A brief difcourse of Alchimy;	and first of Metals i
general	YOUAM 45
27. Of Saturn or Lead	45
28. Of Jupiter or Tin	46
29. Of Mars or Iron	11.146
30. Of Sol or Gold	de garman de
31. Of Venus or Copper	10 to of col
32 Of Mercury or Quicksitver	46
33. Of Luna or Silver	240 Comenches and
34. Of the great philosophick Work	47
35. A rational demonstration of	Chiromatical Signa
tures.	CACHETINE The
36. Of the Line of Life	48 Of the Art of Per
37. Of the epatick or natural Line	To wither out O48
38. Of the Cephalica or head Line	1129 fo 160 aut 10488
39. Of the mensal Line, or Line of	Fortune 485
40. Of the Restricta or Cauda Dra	CORIS MAN 491
41. Of the Saturnia or Line of Satu	Irn 492
	C BUMA (US 10 403
43. Of the Cavea of Mars, and V	ia Martis 494
44. Of the Mount of the Sun, and	Via Solis 495
45. Of the Mount of Venus, and	Cingulum Veneris
( E )	496
the state of the s	46. Of

The Solitonis.	
CHAP. 46. Of the Mount of Mercury 47. Of the Mons Lunæ, and the Via Lactea 48. Of the Mensa or Table 49. Of the Thumb and Fingers 50. The good and evil Lines, Marks and Ch	
51. Containing certain Chiromantical Aphorisms	502
31. Containing tertain Chiramanitae Aprovigins	503
Surge the sign head of antique of	-
And the standard the	Ann
ปักษาสาราชาชาติการที่สาราชานานการเลือน เมื่อเปลี่ยวกับ ในการาชาชาติ	
The same of the real of the Andrie	
Value of the Property of the State of the St	
"He highest Ties was of the sound for Luna 1814.	Ti di
- ide ha	-
Autom of the second	
red Charles Southern	
and Indiana States	
The the Orland Twine Y	
	0 F
BO	A U
tage to the feet of the feet o	

# BOOKVI

Containing the one hundred and twelve ARCANUMS of Peter John Faber, a most eminent and learned Physician.

Containing empsin Chiromanical Apharifus

CHAP.	Pag.
1. THe highest Tincture of Sol fixed for Luna	
1 2. The manner of fixing Luna .	512
3. A fixed white Tinture for Venus	513
4. The fixed Oyl of Mercury	514
5. The red Cinnaber of Antimony	515
6. A fixed Tincture for Venus	516
7. To fix the Oyl of Tartar	517
8. To fix the Oyl of Sal Armoniack	ibid.
a. A monderful Tintture from nubified Vitriol	518
10. To make Oleum Solis for the former Work	520
.11. To multiply Sol and Luna	521
12. A fixt Tincture on Venus	522
13. The purging of &, for receiving the faid Tintte	
14. The congelation of Mercury	- 524
15. To make fine Sol of the Regulus of Antimony	525
16. Tomake Sol	526
17. To blanch Venus	527
18. To cement Sol	528
19. To make Oyl of Sulphur vive	7.
20. A projection upon Mercury for Sol	ibid.
to at historian when tricically los 201	
	21. To

ALLAN	Dan
CHAP.	Pag
21. To extract Mercury from Antimony	5.30
22. An Elixir for Sol Too or VIDOTON WELL	J 27.235
22. To make the Virgins Will	5.32
12. To whiten Venus	533
A preparation of Mescury and Antimony	S34
28. A Tinterre of Luna upon Venus	31A 535
27. A Tincture of Sol upon Luna	11 07 534
38. To tinge Luna into Sol	11 01 537
28. To tinge Lund into Sol with Sutplom and M.	862 Tem
38. To tinge Luna into Sol with Sulphur vive an	
TV? EitH. 1 saway at Tradition	
457 7 white Vones with Ar Guid Volume	539
31. To whiten Venus with Arfenick	To the
32, 10 tinge facts Dutia not Don	·
33: 10 make the remoter of later chi	TOTAL.
34. To tinge Luna into Sol	543
35. To make Crocus & more noble for the former	3907 544
36. To make Water into good Wine	545
37. The fulible Oyl of the golden Marchaste	547
38. The Oyl of an Atcali for the former secret	548
30. To tinge Luna into Sol	ibid.
40. To make the Mercury of Antimony	549
41. To extract Mercury from the Calces of Me	
12. To turn Antimony into Sol	1016- 551
43. The Mercury of Luna, and therewith a gr	
the Little file 301 I have been been been been been been been be	552
44. To fix and tinge Venus into fine Luna	553
45. To fix and tinge Luna into fine Sol	ibid.
46. To fix Mercury isto fine Luna	tares co.
. Ulula - C I Carrier The Language Control of the C	554
	555
The contract of the contract o	556
49. To fix Mercury into Luna	557
50. To fix Mercury into fine Sel	101d.
St. To make the Oyl of Gold	559
F2. To fix Luna	560
	53. To

CHAP.	Pa
53. To extract Mercury from Sol	56
54. To fix this Mercury into Sol again	56
55. To fix Mercury into Luna	ibi
56. To cement Luna into Sol	.56
57. Aurum potabile to prolong life	56
58. Argentum porabile for all Diseases of the	Brain 56
59. To transmute Luna inte Sol	56
60. To transmute Venus into Luna	- 56
61. To make an everlasting filver Mine	56
42. To make an everlasting Golden Mine	529
63 A tinging Water, to tinge Luna	57
64. To multiply Luna	571
65. To tinge Luna into Sol	57
66. To make the red Oyl of Antimony	574
67. To fix Luna	575
68. A Tincture from Mars to tinge Luna	576
69, To reduce Sol into Mercury with common !	577
70. To make a Golden Mine	579
71. To make the said Mine tinge Luna into So	581
72. To convert Mercury into Sol	582
73. To transmute Mercury and Luna into Sol	583
74. To tinge Venus into Luna	484
75. Another to tinge Venus into Luna	585
76. To tinge Luna into Sol	188
77. To tinge Luna into Sol	587
78. To make a Water of Mercury	588
79. To tinge Venus into Luna	589
80. Another way to make the Water of Mercury	590
81. To make Mercury Water another way	ibid.
82. An Elixir of the white Stones of Lead	591
3. To prepare an Elixir from Pearl	593
4. Tomake small Pearls into great ones	598
5. To make malleable Glass	598
6. To make Carbuncles of Crystal	599
133	87. To

CHAP.	Pag.
87. To make trees bear Fruit three times a year	600
88. To fix Mercury with falt of Jupiter	603
89. To fix Mercury into a red oyl	604
90. To fix Mercury into a white oyl for Transmutat	ion 605
91. To make a red tincture of Nitre	606
92. To make a white Elixir	607
93. A red Elixir for transmutation	608
94. Spirit of May Dew for the former Secret,	609.
95. Tofix Arfenick and 11 10 191101	610
96. To reduce Sol into its first matter Manie	9 611
97. To make Spirit of Mercury	613
98. Spirit of Quick-lime to disolve all things	ibid.
99. To make Luna of Jupiter	611
100. A white Elixir for transmutation into Luna.	A615
101. Ared Tinture of Mars for Sol A	617
102. An Elixir with Jupiter for the white Work	618
103. A leffer Tincture for the white Work	610
104. A physical Stone made of Dem smold stoll	621
tor. To fix Mercury a bid of Control wife of . To	623
106. To congeal Mercury into Luna of Viland	624
107. To extract the Mercury of Antimony	ibid.
108. To turn Saturn into Mercury	628
109. A Tincture of Sol for Luna main sente	ibid.
110. A Tinsture of Lana for other Metals	
111. Red oyl of Vitriol, a secret in all diseases	628
112. To make a red Tintture of Arfenick A	10 10
113. The Conclusion of the firsth Book	630
ie's lived to a le arren autorine A arris	631

# BOOK. VII

The Cabinet of Physick; or,a Collection
of choice Medicines fitted for vulgar uses

605 607

bici guilt the soloffile or said-him? To rive	2. 5
CHAP. patient to find sham of	Par
110 A Qua Regulara, or Eye Mayer M. Side N.	.63
2. Aqua Bexoartica, Plague motor	.63
3. Cathericum Argente uni the Silver Burge.	64
of Tinctura Coralioralis, stimbore of Coral 11 1	.64
Tinctura Stomachicum Stomach Tintipre	64
6. Tinctura Bezoartica, Cordial or Bezontick Tine	64
7. Tinctura Hysterica, Womb Timbere houses of	65
Tinctura Cathartica, purging Tinterresvas of	65
9. Guttæ Vitæ, our Cordial Dropen and war of	651
Tinctura Martis, tincture or extract of Steel	660
Spiritus Mini alchooligatus, alchoolized Spir	
Red of of Viville, a fearer in all difeafortist 628	669
2. Spiritus Anodymus, Spirit eafing Pain	665
3. Spiritus Aperiens, opening Spirit	668
4. Spiritus Antiasthmaticus, afthmatick Spirit	671
5. Potestates Cornu Cervi, Powers of Harts Horn	672
6. Potestates Baccarum Juniperi, Powers of Juniper	Ber-
ries	675
7. Potestates Carui, Powers of Caraway	678
	680
	682
20. Potest	
Z: * ****	

CHAP.	Pag.
20. Potestates Limonum, Powers of Limons	684
21. Potestates Pulegii, Pomers of Pennyroyal	
22. Potestates Rosmarini, Powers of Rosem.	ary 689
23. Potestates Succini, Powers of Amber	691
24. Potestates Terebinthinæ, Powers of Tury	centine 694
25. Elixir Proprietatis, Elixir of Property.	695
26. Oleum Sulphuris, oyl of Sulphur	697
27. Tabulæ Emeticæ, vomiting Lozenges	700
28. Sal Mirabile, wonderful Salt	702
29. Sal Vitriolatum, vitriolated Salt	705
30. Calomelanos, the white Purge	708
31. Præcipitatus albus, white Precipitate	710
Arcanum Corallinum, coralline fecre	et . 712
32. Pulvis Regalis, royal Powder	ibid-
33. Pulvis Antifebriticus, Pomder against Fi	evers 715
34. Pulvis Bezoarticus, our cordial i onder	717
35. Hercules noster, our All-heal	720
36. Antidotus seu Theriaca nostra, our	Antidote or
Treacle.	724
37. TheriacaLondinens.nost.our new London T	reacle 726
38. Laudanum volatile, our Cordial Pills	730
39. Extractum Pectorale, pettoral Extract	735
40. Balfamum Sulphuris, Balfam of Sulphur	737
41. Balfamum Amicum nostrum, Our Fi	riendly Bal-
Sam.	740
42. Balsamum Arthriticum, Gout Balsam,	744
43. Pilulæ Panchymagogæ, Our Pills for the	Pox 746
44. Pilulæ Familias nostræ, our Family-Pills	749
45. Balfamum de Chili, Balfam of Chili	756
46. De Vehiculis, of Vahicles for conveying	of Medi-
cines into the Body	760

	SANO
Den Provide Windows	on Potentiates Ligar
Teneral Takes II	ele Lasteflato'i , i a
	and analysis of the
	ionel entitlem force
	Horner + Management
x = 1, al the serve View of the Visit House	and Populary Tee
VIII VIII VIII VIII VIII VIII VIII VII	as relative Despite
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un noluting the Brings wife	DESIGNATION AND ASSESSED.
645	, A60h
Committee of the same	per manual de 43
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Managham Staling State
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	d. communico.
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By reason of the hast of the Press, the following Notes were forgot, or overlookt, which in the next Impression may be put in their proper places.

#### LIB. I. CHAP. II.

After Sect. xviii. pag. 8.

XIX. A Nother way to make Pastils or Crions.

Take Tobacco Pipe Clay before it is burnt, and grind it well with a little weak Gum-Water; then add to it Vermilion, Blem Bice, or yellow Oaker, or what other colour you please: Let your Gum Water be very weak, lest it bind too hard: make it up into little Rowls, which dry, and scrape each, to a point for use, as you need them.

XX. Another way to do the fame.

Take a great Chalk stone, make deep furrours in it, two or three inches long, and so large that you may lay in each a quill: then take white Chalk ground very fine, temper it with Oyl or Wort, and a little

new Milk, and so make Pap thereof, then pour it into the Chalk Furrows, which in a short time you may take out, and roul them up, as you would have them; or otherwise let them lye till they are quite dry, and then take them out and scrape them, into the form you desire: you may temper Lake with burnt Alabaster for a Red, and so for other Colours: but Colours which bind over hard, must have a little Water added to them in their grinding.

XXI. To draw with Indian Ink.

The out Strokes being first drawn with Black Lead, (after the dust of the Charcoal is well brushe off with a Feather ) then take a stick of Indian Ink, of the best fort, (not that which is whitish and hard within, for that is naught, and will not work well) wet one end of it with Water, or rather with your Spittle, which is better, for that is not so subject to fink into the Paper, which ought to be very good Dutch Paper; and have ready fix or eight small Pencils of feveral fizes, which put on little Sticks two or three inches long the better to hold them: with the one Pencil you must draw, and with the other at the other end of the Stick, you must like being a little wer with your Spitcle) wipe off the hard edge: begin faint at first, then shadow it higher as you please; otherwise if it be too dark at first. you will be in danger of faciling your work. The least rouch of your Pencil on the Indian Mk is enough; this manner of drawing is pleasanniand admirable. and now much in use, setting off the Work very neatly. See Lib. 2. Com 3 to Seek your of this Work. a great Chalk stone, make deep furrour

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lay in each a quill: then take white Chalk giot VAR HO tapter it with Oyl or Wore, and a hi N

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After Sect. 35, Pag. 104.

XXXVI. O Bservations upon some of the prevending Colours: and first of REDS.

1. Vermillion. It is a most perfect Scarlet Colours fome fay it is fo fine that it needs no grinding but may be tempered with your Finger with glair or Gum-Water, and fo used mixt with a little yellow Berries, it makes it the lighter and bright ter Colour, and is then principally used for Garments. 2. Red Lead. It is the nearest to an Orange Colour; and mixt with yellow Berries, it makes a perfect Orange. It is used for Buildings and high ways in Landskips, being mixt with a little White It is the only bright Colour to shadow yellow Garments with to make them shew like changeable Taffety, and to colour any light Ground in a Picture, and several other uses, as you see occasion. 3. Cinnabar Lake, You may shadow with it yellow Garments in the darkest places, as also Vermilion mixt with white only, it makes a Sky Colour. With white and red Lead, a Flesh Colour; and is an excellent Colour of it felf to colour Garments with. This Colour is dear, and therefore in stead thereof, for ordinary uses, you may use Red Ink, thickned upon the Fire, which will ferve very well; and better than Lake, unless it be very good. 4. Red Ink. It. is made by boyling Brazil in Powder in Vinegar

mixt with Beer, adding a little Alum to highten the Colour: boyl it till it tafts ftrong on the Tongue, then strain it out, and keep it close stopt for use. If you thix it with a Flesh Colour, or make a Sky Colour thereof, you must not thicken it.

XXXVII. Observations on BROWN Colours.

1. Spanish Brown. It is a dirty Brown Colour, but of great use; as also to shadow Vermilion, or lay upon a dark Ground behind a Picture. You may shadow yellow Berries with it in the darkest places, when you want Lake or thick Red Ink. Colour not Garments therewith, unless it be old Men's Gowns. 2. Umber. It is a Hair Colour, and the best and brightest when it is calcined red hot. But to colour any Hare, Horse, Dog, er. with it, you must not burn it; but for other us it is best calcined or burnt, as to colour Posts, bodies of Trees, Timber-work, or any dark Ground in a Picture. Use it not in Garments, unless in old Men's Gowns, or Caps standing to gether, for that they must not be all of a Colour. But for distinction and variety sake, you may use it unburnt in many cases.

XXXVIII. Observations on GREEN Colours.

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1. Verdigrise. It is a good Green, but subject to decay: being dry upon Paper, it will be of a higher Colour than when it was first laid on therefore to preserve it from that fault, dissolve Sap Green in it, and it will keep its Colour. You may make it fine by extracting its Tincture with Spirit of Vinegar, and then evaporating to dryness; an ounce of that will be worth ten ounce of the other. z. Verditer. It is a light Green, feldome nied in any thing but colouring Landskips

skips, which feem afar off; and it is good for such a purpose, because it is inclining to blew. 3. Sap-Green. It is a dark dirty Green, never used but to shaddow other Greens in the darkest places; or to lay upon some dark ground behind a Picture, which ought to be of a dark Green: but you may do without this Colour, for Indico mixt with yellow Berries make just such another Colour. 4. Copper-Green. It is an excellent transparent Colour, of a shining nature, if thickned in the Sun, or over a gentle Fire. It is most used of any Green in washing of Prints or Maps, especially in colouring of Trees, Ground, Grass, esc. for it is a most perfett Grass-Green.

XXXIX. Observations on TELLOW Colours.

1. Saffrow. It is a deep Yellow if it stands long, and is good principally to shadow yellow Berries with instead of Red Lead; but is somewhat a brighter shadow: Red Lead and yellow Berries, make just the like Colour, x. Massicor. It is a light Yellow, just like yellow Berries mixt with White: it is used to colour a light Ground in a Picture, and then to shadow it with the Water, vie, the thinnest part of the Colour of burnt Umber or Red Lead. 3. Tellow Berries. It is most used in washing of Maps, Pictures, co. of all other Colours it is bright and transparent, sit for all uses, and sufficient without the use of any other Yellow.

XI. Observations on B L EW Colonts.

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1. Blem Bive. It is the most excellent Blem next to Ultramarine, and may serve in stead thereof. It is too good a Colour to use upon all occasions: and for more ordinary uses, you may use Small in stead of either of them, but it will not work so well

well as Bice, when you intend to bestow some cost and pains upon a piece, you may use Bice; otherwise you need use no other Blew in your Work than Blew Verditer; with which in ordinary Works, you may make a pretty good shift, though all the other Blews be wanting. 2. Indico. It is a dark Blew, and principally used to shadow with upon other Blews. Mixt with yellow Berries, it makes a dark Green, to shadow other Greens with in the darkest places. 3. Blew. Verditer. It is a very bright pleasant Blew, and the easiest to work with in Water: it is somewhat inclining to a Green, and the Blew which is the most of all used, mixed with yellow Berries it makes a good Green.

XLI. Observations on WHITE Colours.

1. Cerufe. It is the best White, next to Spanish White, and better than white Lead, if it be good and finely ground, as you may have it ready prepared at the Colour-Shops; being only white-Lead cleansed and made more pure. 2. White Lead. It will serve in place of the former, if washt as before is directed; either of them will serve the same occasion, and being mixed with another Colour, they make it lighter, the which you may vary in proportion as you see occasion.

XLII. Observations on BLACK Colours.

1. Lamp Black or Printers Black. It is the most used, because it is the easiest to be had, and is good in Washing. But you must never put Black amongst other Colours, to make them dark, for so they will become dirty; neither shadow any Colour with Black, unless it be Spansh Brown, when you would colour an old Mans Gown, which ought to be done of a sad Colour; all other Colours shadowed with

with Black, look dirtily, not bright, fair or beautifu! a. Ivory Black. It is the deepelt Black that is; and is thus made. Take pieces of Ivory, but it into a Furnace till it be throughly burned, then take it out, and let it cool; pare off the outlide, and take the blackest in the middle.

In using of these Cakes, you may take one, or a part of one of them, and put it into a Horse-Muscle-Shell, which is very clean, adding a little fair Water; just enough to wet it all over, letting it lie to about a quarter of an hour: then fourez ir hard against the Shell, or wring it out between your Fingers, and there will come forth an admirable transparent Colour, which will serve in stead of Lake, if your Red Cake be good. Thefe Cakes are commonly counterfeit and good for little, but you may lenow them by cutting a little way into them: if they be good they are as red within as they are without; if naught, they look pale and whitish within. My with where if the Lake and Red Lead one

wifield quantity of each you may make, it as light or as red as voil cleafe, by putting more or left

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#### LIB. II. CHAP. XIX.

After Sect. 26. Pag. 107.

XXVII. TO make a Purple Colour.

Take Log-wood, boyl it in Vinegar and Beer, in a glafed earthen Veffel, adding thereto a little Alum, till you talt it to be strong on your Tongue: being sufficiently boiled, strain out the Liquor through a Cloth, and keep it in a Glass close stope for use.

XXVIII. Anather Purple Colour.

Mix Blen-Bice and Loke together; or if you want Bice, take Birn Verditer (but that is not altogether logoods) mix them well sogether and it is done. If you want Loke, you may in stead abereof use thick red Joh, which will do as well as bekenn Walking.

XXIX. To make a Flesh Colour.

Mix with white a little Lake and Red Lead; a very small quantity of each; you may make it as light or as red as you please, by putting more or less White in it. If you would have a swarthy Complexion, to distinguish a Mans Flesh from a Womans, put a little relion Oaker among your Flesh Colour; and for your shadow put a little more Lake, and a small quantity of burnt Omber.

XXX. To make Cloud Colours.

You may sometimes take Blew Verditer; or White shadowed with Blew Verditer: sometimes light Maficote shadowed with blew Verditer; or Lake and White, or red Ink and White shadowed with blew Verditer, as aforesaid.

XXXI. To

XXXI. To make Sky Colours.

Mix White with light Masticote or yellow Berries for the lowest and lightest places: red Int not thickned and White, for the next degree: blew Bice and White for a higher degree: and blew Bice alone for the highest of all. In stead of Bice you may use Verditer; all which must be laid on, and so wrought one into another, that there be no starpness or sensible beginning in the edge of your Colours, but that they be as it were one drowned in another.

XXXII. To make Colours of all kinds of Me-

sals.

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Take a piese of Crystal, beat it by it self in an Iron or Brass Mortar, and grind it dry, on a Marble of Porphyry Stone, till the Powder be very fine; then grind it again on the same Stone with good Glair of Eggs, and lay it on the Work with a Pen of Pencil; being well dryed rub it over with Leaf Gold, or any other Metal, and it will be of the same Colour that the Metal is of. If Quick Silver two ounces be amalgamated with Tim one ounce, then melted, and after ground on a Painters Stone very small, it will be a powder of a Silver Goldur.

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LIB.

### LIB, III. CHAP. XII.

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IV. I Fryour painting be Wainfcotting, or any bother Joynery or Carpentary Work, you may take the Wood-aftes (at Sect. 1.) and mixing them formewhat thick with Water, tub! them over the Painting, with a stiff Britle Bruth, and so shoo Bruth, and to scour, wast and dry it, as a soveraid, and then warnish it with common Varnish.

V. But if the Painting be more curious, as Figures of Men, Beafts, Landskips, Flowers, Fruits, &c. then take Smalt only, and with a Sponge wet in Water, releanse it as abovesaid gently, which wash after with fair Water, then dry and varnish it, so will the lustre and glory of your Painting be much recovered.

VI. This cleanfing of Paintings, ought not to be practifed but feldom (viz. when it is very much foiled) because often and too frequent cleansings in this kind, will by degrees wear off part of the Colours: And therefore endeavour to preserve their first Beauty, by keeping them from smoak, dust, slys, &c.

VII. All Pictures, (chiefly those performed with mixtures of white Lead) are apt to grow tawny, to tarnish or grow rusty, as may be seen in all old pieces: To prevent this, expose them to the hot Sun three or sour days in May or June: so will the

all colour be much drawn off, and the Painting appear more fresh and beautiful: thus doing yearly, you will wonderfully preserve them.

ies way, they will laft a long tiate,

### LIB III. CHAP. XVI.

After Sect. 7. Pag. 199.

Of fitting up and Painting Sun-Dials, Timber-work, &cc.

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VIII. To the Dial be not drawn upon the Wall it I felf; you must have a Dial Plain, which you may make of the firmest and clearest Oak, and throughly dry, so as that it may be free from thrinking. Cut your Board to fuch a length, as you intend the length of the Dial to be of, and fo many of them, as may make up the deligned breadth; joynt and plain them on both fides, then fer them to dry ( for though they have lain in a House newer so long, and are never to dry, yet being thus floor and plained, they will shrink afterwards bewond belief.: ) when they are dry enough, and will thrink no more, those them again with good Joynts, which fasten together in the glewing with Pins or Pegs, as Coopers do the bottoms of their Tubs: being thus glewed and dryed, let it be well plained, and tryed every way, that it may be both smooth and true: let the edges be shot true, and all of a thickness, that they may fit into the Rabets of the Moulding, put round it, just as a Pannel of Wainfcot doth in its Frame: this will give the Board liberry to flaink and fwell without rending, whereas mouldings, nailed round the edges, as the vulgar way is, doth fo reftrain the motion of the Wood, that it cannot shrink without tearing; but made this way, they will last a long time, without either parting in the Joynes, or splitting in the Wood

IX. The colours chiefly made use of in painting Dials are chiefly 1. Cerufe, 2. white Lead, 3. Lamp-Black, 4. Char-cole or Sea-cole, 5. Spanish-8, Cinnaber brown, 6. Red-lead, 7. Vermilion, Lake, o Smalt, 10, Blew Bice, 11. Blew Verditer, 12. Indico, 13. Umber, 14. Verdigfile, 19. yellow Oaker, 16. yellow Pink. But for a Plain Sun-dial, thefe four Colours will ferve, vie 1: domiff Bram, for the prairing Colour, a Vermilion, for Brawing the Lines, 9. Lamphick, for drawing the Figures, 4 white Lend offer the last Colour to be laid upon the Plaine digner a

X But if you will have your Dist more tich, you must have I. Les Gold for gilding, 2. Gold Sixe, to make the Figures to lay Gold on, 3. Smale or Blen Die for the Margin and inner Table. And for cursofity fake, you may use fuch other Golours, as your fancy shall direct you to be most suitable to the defign. To these things add Linford Oyl, to temper your Colours with : and Oil of Tarpentine, to mix a little of it with your Colours, to make them dry

the more freetily.

XI. Cornfe and white Lead, me eafie to be ground fine; and the only white Colours used in Painting in Oyl; thefe are the last Colours to be laid on the plains of Dials : and with them Posts, Pails, Palifadoes, Gates, Doors, Windows, Wainsconing, &c. are often coloured both for beauty and prefervation, they shey refifting the Weather well. They dry well, but to make them dry more speedily, some in rempering put Oyl of Turpentine to them; but then without doors they refire not the Weather so well.

2. Lamp Black, is a fair Colour, and may be tempered with Linseed Oyl: But it must be first burnt, then ground, afterwards tempered with the Oyl: a little of this with much white, makes an associating to the proportion of either, it gives several delightful varieties.

3. Charcole, is a good Black for ordinary uses, but it must have good labour in

stinding to make at fine wit dries well.

XII. Appoint Brown, the best is of a deep bright colour and free from Scones y it grinds well with pains, and is the only colour used in priming all manner of Timber-work, 1 because it is theap . 2. Because it drys landly, year gives the Oyl sufficient time to pierce into the Woodo as Because it freely recrives all other Colours which are laid upon it. This of it fell is a perfect horse Flesh colour, and z natuthe shadow for Vermilions being mixe with white, it eives fundry varieties, according to the various proportions to the Loud, in it not to be ground very line on a Stone, but you may make it fine by walking: it is a great dryer and binder, for which cause it is mixed with some other Colours, to make them dry focedily: and it notably refulls the weather, as well as any Colour what foever. Thermilion, It is a rich Colons, and of a good body, if it be fine ground, otherwise it is as bad a Colour as any: but being ground as fost as Oyl; no Colour works better. You had best to buy it in the Stone, left it be sophisticated with red Lead. It is a perfect Scarlet, and mixt with white, it gives a Comanion, in there's varieties, according to the proportions. Its shadow

is Spanish Brown. With this we commonly draw the Hour Lines on Sun dials. 4. Common Lake, It is a rich Crimson colour, and is to be ground very fine. Mixt with Bice it makes a purple of divers varieties, according to the proportions. Mixt with White, it makes a Crimson Carnation in divers Varieties, which White and Red Lead, a fresh colour. It is used in Ornaments of Dials, and in several Flowers. A Margin of a Dial with Gold Figures, is beautiful.

XIII. Smalt, it is a delicate Blew at a distance, if strewed on : if you will work it in Oyl, it must be made fine with washing, and mixt white Lead. but even then it works not well, but in time will be apt to turn Black. The best way therefore is to strew it on, and then there is scarcely a more glorious Blew: it is a good colour for the Margin of a Dial, if it be figured with Gold, as also for other purposes. If you buy it to work in Oyl, the finest is best, which they call Oil smale. 2. Blew Bice, It is a pale colour, and fine enough for almost any use, and works well, though a little fandy. It is used for a Margin ground in Dials, to gild Figures in small Plains, that are near the Eye. Mixt with Pink, it makes a Green: with Lake a Purple : With white a light Blem; and in each feveral varieties according to the proportions. 3. Blew Verditer, It is fandy, apt to change and turn greenish. It may serve in Dial Painting where Bice and Smalt are wanting, but not so good as either of them. Mixed with yellows, it makes a good green: with Whites or Yellows, or both, many other varieties. 4. Indico, It is a very dark Blew, and feldom used without a mixture of White, unless to shadow with It grinds fine, works well, and is much used in common Painting for the last colours of Posts, Pales, Rails.

Rails, Pallifadoes, Doors, Windows, or any other. Timber work, for that it relifts the weather well. It is dear, and therefore many Painters use Blew-Balls, which is almost like it, but not so good a colour either for beauty or lasting, mixt with White, it makes a Led Colour: and it is excellent

to marble white withal or to shadow it.

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XIV. Umber. It is a perfect hair colour, it may be ground very fine with much labour, and dryes and binds exceedingly, and therefore very well relifts weather. It is much used in Painting for the many varieties it gives. Calcin'd in a Crucible, it is the natural shadow for Gold, and some other colours. 2. Verdigrise; It is a perfect Willow Green, and therefore for some uses must be corrected with yellows. Tis very foul, and therefore ought to be cleanfed thus. Grind it fine, and put to it eight times its weight of spirit of Vinegar; digest till the Vinegar is tinged very Green: then decant the colour, cast away the Faces, and evaporate the Vinegar in a brafs Vesica, so have you a glorious Verdigrise as she bottom, of which one ounce is worth ten of the former. It drys speedily: mixt with Pink yellow, it makes a pure lively grafs Green: with White, many varieties of light Greens, &c. 3. Tellow Oker. It is either English or Foreign. The one is of a Wheat straw Colour, the other fomewhat deeper. with much labour it may be ground very fine. It is much used in vulgar Painting, and to make Gold fize withal. 4. Tellow Pink. It is a yellow inclining to Green, and grinds well. It is a good colour for some uses, but chiefly to mix with other colours, to make Greens withal. your work wi

will be more Jub landel, than river

XV. The aforegoing Colours are now to be either Burnt, Ground, on Walkt, as they severally require; and as we have raught in Chap. 42. aforegoing of this Book: this done you are to grind them with Cyl, thus. Take about two spoonfuls of the colour you intend to Grind, and put to it a little Linseed Cyl, (but see you put not too much) mix them together, and grind them well upon your stone with a Muller: add Cyl by degrees, till it comes to the thickness of an Cyntment, for so it grinds much better than when it is so thin as to run about the stone: oftentimes as you grind, bring the matter together with a piece of Lanthorn horn, and as much as may be keep it together in the middle of the stone, till it is ground fine enough, then take it off, and put more colour upon the stone, grinding as before, which work continue till you have Colour enough to serve your occasion. This done, if you grind other colours after it, cleanse the stone first by grinding Sand and Water upon it, then washing it, and drying it.

XVI. The Colours thus ground will be too thick for use, without adding more Oyl: therefore when you use them (whether simple or compounded, as your occasion requires) you must add more Oyl to them, till they be so thin as to run free with the Pencil, yet not to let the ground on which they are laid, to be seen through them, or to run about when it is laid on, for so, you must be forced to go over it the offner, before your work, will be substantial; whereas, if your Colour be as shiff as it can well be wrought, your work will be done with more speed; and once doing will be more substantial, than three times

times with the thin Colour. This is the cheat of common Painters who do work by the yard, at a certain price; they do it with such thin Colour that all their three times doing over, is not so substantial as one time would be, if the Colour had been of a thick and strong body: and three times colouring with such a thick and well bodied Colour will last ten times as long, as that which is wrought thus slightly by common Painters.

XVII. Observe also, that if the Colour to be mixt, be your priming Colour, viz. the first colour you lay on, it ought to be made so much the thinner, that it may have Oyl enough to pierce into the Wood, which is much for its durability; but after your first Colour is laid on, let your next

be thicker, as before is taught.

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XVIII. But if your Colour to be mixt be for the drawing of Hour-lines, or making the Figures in a Sun-dial, then let it be tempered as stiff as is possible to use it, that it may not presently decay, but may be capable by the quantity laid on, to last as long as any colour on the Dial; to which purpose its being wrought in Fat Oyl will much conduce: how this fat or thick Oyl is made, we now come to teach.

XIX. How to make the faid fat or thick Oyl. Take Linfeed Oyl what you please, put to it a sufficient quantity of Red-Lead (the more, the better) so as it hinders not the boyling. This Red-Lead, adds a drying quality to the Oyl: let them boyl gently. over a Charcole fire without flame, till it is boyled enough, which you may know by taking a little of it out and cooling of it; if it roaps like thin Treacle, or a Syrup, it is enough: then with a lighted

lighted paper set it on fire that it may take away much of its greatiness, let it burn a minute or two, more or less as your Oyl is in quantity; then extinguish it, by covering it close over with a Cloth, and letting it cool and settle, decant the clear Oyl.

and keep it in a bladder for use.

Take Tellow Oker, XX. To make the Gold fize. grind it on a stone with water, till it be very fine, and lay it on a chalk Stone to dry: Or thus. First grind it fine as aforesaid, then wash it (by Sect. 6. Chap, 22, of this Book), and thereby separate the pure fine part of the Colour, which dry as the former. Take of this prepared Oker, what you please, add to it a little of the former prepared Oyl. and grind them together as you do other oyl Colours: this work will be laborious, for it must be ground very fine, even as the Oyl it felf; and the tiner it is, the greater lufter will your Gold carry that is laid on it. Where note, that you put fo. much of the prepared Oyl to the Oker, that it may be of a good stiffness to work well, and of such a fit body, that after it is laid on, it may fettle it felf smooth and glossy, but not so weak as to run. See Chap, 21. Sect. 5.

See Chap. 21. Sett. 5.

XXI. How Colours are to be set off. 1. Blews set off best with Yellow and Whites: indifferently with Blacks and Reds: not at all with Greens, Purples; or Browns. 2. Greens set off best with Whites and Yellows: not at all with Blacks, Blews, or Reds: 3. Reds set off best with Whites and Yellows: indifferently with Blacks, Blews, and Blacks. 4. Tellows set off best with Blacks, Blews, and Reds: indifferently with Greens, Purples, and Whites. 5. Whites and Blacks set off well with any Colour, because they so much

differ from all others.

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XXII. The manner of Painting Sun-dials. Having the draught of your Dial on paper, your Flain or Board fitted, and your Colours prepared, proceed thus. Take Spanish Brown well ground, mixed, and somewhat thin, and with a large Bristle Brush, colour therewith your Plain all over, on every side, so that no part be left undone. This is called the Priming of your Dial. When it is dry, do it over again with more of the same Colour, tempered somewhat thicker, which when dry also. You may do it over again a third time, with the same colour, so will your work be the stronger, and last longer.

XXIII. When this last time of colouring your Plain is dry; then go over it with White-Lead Colour; which when dry, go over it again three or four times successively after each drying: so will the face of your Plain be defended against the fury and

violence of the weather for many years.

XXIV. To transferr the Draught of your Dyal upon the The last Colouring being dry, draw on the Plain (with a black Lead Pencil) a Horizontal Line, fo far from the uppermost edge of your Dial, as your Reason shall think fit, or best convenes with the Plain: then set out the margin of the Dial, with fundry Lines for the hours, half hours and quarters: after, take the Draught, and place it on the Horizontal Line, observing to place the Center, according as the Situation of your Plain requires: if the Dial be a direct South Dial, let the Center be exactly in the middle of your Plain; if your Dial declines Eastwards or Westwards, place the Center of the Draught, between the Center of the Plain, and the Eastern or Western side thereof: If it declines but little, place the Center of the Draught, (c) but but a little from the Center of the Plain: if it declines much, place the Center of the Draught the more out of the Center of the Plain: for by thus doing you gain a greater distance for those Hour-lines, which in declining plains fall hearer to gether on one side than they are on the other; and you ought to do it in all declining Plains, except they decline far, as between eighty and ninety degrees, for then they are best to be drawn without Centers, to gain the more distance for the Hour-lines.

XXV. The Draught being thus placed on the Plain, and fastned with Pins or Tacks; transfer it upon the Plain, by laying the Ruler over every hour, half hour, and quarter division; and where the Ruler shall intersect the boundary lines in the Margin, there make marks, by drawing lines with a Black Lead Pencil of such length as each division require, drawing the hour and half hour lines quite through the Margin, for the guiding you in the right placing the Figures. Then draw the Sub-stile Line, a it lies in the Draught, that it may guide you in right placing the Stile of your Dial.

XXVI. This done, take the Draught off, and with Vermillion well ground and prepared, draw the boundary lines, as also the hours, half hours, and quarters: let the colour be as thick and stiff as you can work it, so as to draw a clear and smooth Line: the Lines being drawn, then with Lamp-Black delineate the Figures; and in the Margin at the top of the Plain, you may put the date of the year, of the proper Motto; lastly fix in, the Stile of you Dial, and paint it in like manner as you did the Diagon.

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before: thus is your Dial compleated.

XXVII. To gild the Figures of Sun-dials. Dra the Figures or Letters you defire to have gilt win

the Gold fize (at Sect. 10. above) which let dry for long, till that by touching it with the end of your finger, it will flick a little, yet not come off them take leaf Gold, lay it upon your gilding Cuthion; and with a very sharp and smooth-edged knife; cut the Gold into fuch pieces as may best best your work then with a flat stick lin'd with Cloth, take up your cut pieces of Gold, and transfer it to your fize; upon which clap it down; and your Gold will leave your lin'd flick, and cleave to the fize, which then press down with Cotton, or a Hares foot. Thus do till all your fize is covered with Gold : and when it is perfectly dryed, with your. Hares foot, brush off all the loofe Gold, and the gilding will remain fair and beautiful: then if you please, Diaper on your plain with thin Umber, what soever shall be suitable to your defign.

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defign to make the Margin of your Dial Blew, you must do it thus. After the figures are gilt, take white Lead, stifly tempered with fat Oyl (at Sect. 19. above) and therewith cover over your whole Margin: and then with a small fine searse sift on your Smalt; or otherwise with a Goose quill Feather, cover your Margin over with it, and with a piece of Cotton dab it down close, that it may stick fast to the ground laid under it: when it is all throughly dry, wipe off the loose colour with a Feather, and blow the remainder off with a pair of Bellows; so is your work sinished: the square of the Dial may also be coloured Blew (if

you so please) after the same manner.

XXIX. To Paint Wainfoot Doors, Windows, Posts, Rails, Pails, Gates, and other Timber work. This differs not much from the former method of Painting (c2)

Sun-dials you may proceed thus. Prime ( the thing to be painted ) first with Spanish Brown, as you did your Dial Plain, two or three times. Then take White Lend well compered, or Umber and White or Blen Balls, or Indice and White, or any other Colour youintend your work shall be done with; and that Colour (what ever it be) let it be laid over your former Priming, four or five times facceffively after each Drying: for the oftner it is gone over, the longer it will last: you may do it with variety of Colours, or Marble it as you please, fo shall your work be finished according to your defire. Ruchere note, that Wainfeotting, and other Paintings within Doors, need not be done above twice over, with the last Colours is only that Painting which is exposed to the Air and Weather that requires fo many times running over it: and indeed, if it be not well and often done, it will not laftlong, or be of any confiderable fervice.

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Take Ambet in power, as much as your issue in the are with Lindeed Owl, or O. 1 or Vialle Walker melt distince experient, on they acquire a western colours then occur them forth upon a Western.

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after Sect. XIV. Page 222.

XV. V Ernix Italian, The Italian Vernish.

Take Venice Turpentine pure and clear eight ounces, evaporate it over a gentle fire, till the Turpentine is very hard and brittle: make it into a subtil powder, put upon it by degrees Oyl of Turpentine, and digest them so long together till the powder is dissolved: then pour off the clear from the Faces, and keep it for use.

XVI. The Mastick Vernish.

Take Oyl of Turpentine as much as you pleafe: put it over the fire and make it boyl; then by degrees put in Grains of Mastick, so long till the Qyl will dissolve no more: the solution being cooled, separate it from the Faces, and keep it foruse. After the same manner you may make Vernish of Gum Sandarach.

This Vernish is of good use for the preserving and setting off of Pictures: and being laid upon things Gilded or Silvered over, or laid over with the leaves of any Metal; it so preserves them, that they lose not their Colour or Gloss. This differs not much from that

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XVII. The Amber Vernish.

Take Amber in powder, as much as you pleafe: moisten it with Linseed Oyl, or Oyl of Wallnuts: melt them together, till they acquire a black Colour: then pour them forth upon a Wet Marble. This mass beat into Powder, and put it by degrees into Linseed Oyl (prepared before-hand by boyling:) put as much in, as the Oyl will dissolve; then keep it for use.

It is of great use for the Vernishing of Sticks, Fans, Pots, Cups, Tables, Stones, Statues, Cabinets, &c. being laid of with a hard Rencil, the better to spread

it over sec

To prepare the Oyl of Linseed, or other the like Oyls, for the aforesaid Vernish. Take Linseed Oyl what you please; then put into it a piece of Bread, and presently there will be made an effervescence or sermentation, by means of the Aqueous particles: afterwards put in some Alcali, as Linne, Chalk, Whiting, and several Calces of Lead, that the Acid may be absorbed: this done, let it settle, decant the clear, and clarify it: so is it prepared for the aforesaid use. Take of this prepared Oyl, put it over the sire, and put in per vices, the aforesaid Rowder of Amber, Sandarach, &cc.

XVIII. Vernix Japonica, The Indian Vernish, by

another process.

Take the best Gum Lacca in fine Powder eight ounces: The best rectified spirit of Wine sixteen ounces: mix them well, by strongly shaking them in a Glass, so long till the spirit of Wine has dissolved the Lacca; digest it two days, and the Vernish will be finished.

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Where note. 1. That thin Vernish, being laid upon any thing, immediately dries. 2. That it ought to be contimally laid on, till it is thick enough, and the superficies is equal and smooth , 3. That it be chiefly used in April, or May, in a clear Sun-shiring day, and then afterwards dryed in a gentle heat for fix days. 4. That the vernished things be made smooth and even, by rubbing them with Pumice stone and oyl Olive: 5. That their superficies be then polished by farther rubbing them with Chalk, or Putty, so will they shine, and look as clear as Glass. 6. That it may be laid over any Colour you please, by which means the colour will look much more Glorious. 7. That otherwise you may mix the Colour with the Vernish, being first made into a subtil Powder, and either moistned with rectified spirit of Wine, or its Tincture extracted therewith, if it will yield a Tincture, and so mixed with the Vernish. 8. That Sanguis draconis. Red Sanders, and other coloured Bodyes which will yield to a Tincture, may be first mixed with the Lacca, and so the Vernish be made coloured at once, by mixing with the Said rectified Spirit. 9. That being put upon leaves of Metal, as of Gold, Silver, Tin, Brass, it makes them look infinitely more Glorious, and preserves them so. 10. That it ought to be used before the fire, or in the heat of the Sun, otherwise it will be apt to chil, and your work will be cloudy and opacous, not clear and bright.

XIX. A Vernish to preserve Timber or Wooden works

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Take the best and hardest Rosin; purify it well; add to it a sufficient quantity of Linseed Oyl, so much as may conveniently serve to toughen it: melt and well incorporate them together on the fire; then take *Omber* ground very fine and mix it therewith: which being well mixed together, and whilst hot, you may Vernish Timber or other wooden work therewith at pleasure. (c4) Where

Where note, 1. That 'tie an excellent Vernish to preserve Timber or Wooden work, lies like the China Vernish; and will endure ten times as long as any Painting. if well done. 2. That it is good Vernish to preserve the border Boards in Gardens, or any other thing which you would have tast long in wet or Moisture, as the Pillars of Herizontal Sun-dials, Wooden Pails, or Rails, Arbours, &c. 3. That being spread on Cloth with a Trowel, it will make a most excellent ovvering for Tents, Huts, Turrets, Honfes of Pleasure, Pent-honfes, &c. 4. That 'tis an excellent thing to prime Hoggsheads or Barrels, which you use to keep water in ; you may do them both within and without fide, for thereby they will talt a very long time. 5. That though burnt Umber is the best Colour to mix with it, yet you may mix other Colours therewith, in the same manner, as Verdigrise, Red Lead, &c. bin these two last Colours some object against by reason of their corroding quality. 6. Lastly, that the best way to lay this Vernish on, is to heat it hot before you Vernish therewish. for foit will Rick the closer and firmer to the Wood.

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## LIB. V. CHAP. XXIV.

After Sect. x. Pag. 451.

XI. To make the best and strongest Glew, for glew-

ing the Joynts of Bounds.

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Take scummed milk, which has stood so long, that no more Cream will arise from it; scum it very clean, and set it over the Fire in a Leaden Pot, letting it boyl a little; and if any Cream arise, take it off: then put into it a sufficient quantity of Glew; cut into small bits, which will soon melt: boyl it to a good Body, that it may be neither too thick nor too thin; (for in this boyling lyes much of Art;) then take it from the Fire, and use it as you do other Glew.

Where note, I. That this Giew binds beyond belief, and will not be subject to resolve with any ordinary morfure of the Weather; and the reason is, became the curdy part of the Milk, freed from its oyl, is joyned with the Glem. 2. That you take care that it burn not to the sides of the Pot, for them it will be deprived of its strength: so prevent which (both in its first making, and in your after melting of it) you had best both to make and melt it in Baltico Marine; so will you prevent burning, and by that means you may the more safely boyl it to what body you please, without danger of harting the Glew.

XII. An exceeding strong and lasting Cement, to make

a Dial plain on a Wall.

Take Lime and Sand, which temper with a fulficient quantity of Linfeed-Oyl: this spread upon the Wall will harden to the hardness of a Stone, and

not decay in many Ages.

Where note, That this is the strongest and best Plaister for this purpose: but if you cannot get oyl, you may temper your Lime and Sand with scummed Milk, and this you will find to last six times as long as the common or ordinary Plaster made of Lime and Hair with Water.

#### LIB. V. CHAP. XXXIV.

After Sect. xii. Pag. 478.

The process of the said grand Elixir.

Take Mineral Q. S. three pounds; and cause an earthen Pot to be made, well burned the first time; glaze it all over, except the bottom, the which anoint with Hogs Greate, and it will not glaze. This is done that the Earth of the Q. S. may sink into the bottom of the Pot, which it would not do, being glazed, nor become Earth again. The Pot must be made a good foot long, of the fashion of an Urinal, with a Pipe in the midst of it.

XIV. The Furnace must be made on purpose, that the Pot may go in close to the sides of the Mouth of the Furnace Set on the Pot a good great Cap or Head with its Receiver, without luting of it:

give it a gond Fire of Coals, till the Pot be all on Fire and very red; then take the Fire out quickly, and put in the Q.S. at the Pipe, and then with as much hast as you can, stop it close with Lute. Then will the Q.S. by the heat and force it finds, both break and work; a part thereof you shall see in the Water, as it were a few drops; and a part will stick to the bottom of the Pot in black Earth, and so let the Pot cool within the Furnace; as it is; then open it and you shall find the Q.S. in it all black, which you must take out and wash

very clean and the Pot also:

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XV. As for the Water which does diftil out of it, put it aside, or cast it away; for it is nothing worth, because it is all flegm. Set the Pot into the Furnace again, and make it red hot; put in the Q. S. lute well the Pipe, and do as you did the first time : and do this so often, until the Mercury becomes no more black, which will be in ten or eleven times. Then take it out, and you shall find the Mercury to be without flegm, but joyned with Earth, of which two qualities it must be freed, being enemies to Nature: Thus the Q S. will remain pure, in colour. Celestial like to Azure, which you may know by this fign, viz. Take a piece of Iron, heat it hot, and quench it in this Mercury, and it will become foft and white like Luna.

XVI. Then put the Mercury into a Retort of Glass, between two Cups, so that it touches neither bottom nor sides of the Cups, and make a good Fire under it, and lay Embers on the top, the better to keep the heat of the Fire; and in forty hours the Mercury will distil into a slimy Water,

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hanging eogether, that it will neither wet your hands,

nor any kind of thing but Metal only.

XVII. This is the true Aqua Vice of the Philosophers; the true Spirit so many have sought for, and which has been desired of all Wise Men, which is called the Essence, Quintessence, Power, Spirit, Substance, Water and Mixture of Mercury, and by many other the like names, without strange things, and without offence to any Man. Save well this precious Liquor or Water, obscured by all Philosophers, for without it, you can do no good or perfect work: let all other things go, and keep this only: for any one that sees this Water; if he has any practice and knowledg, will hold to it, for it is precious and worth a treasure.

XVIII. Now refleth to make the Soul, which is the perfection of the Red, without which you can make neither Sol nor Luna which shall be pure and perfect: with this Spirit you may make thing apparent and fair, yea most true and perfect: all Philosophers affirm that the Soul is the substance, which sustained and preserves the Body, making

it perfect as long as it is in it.

XIX. Our Body then must have a Soul, otherwise it would neither move nor work; for which Reason you must consider and understand, that all Metals are compounded of Mercury and Sulphur, matter and form: Mercury is the matter, and Sulphur, is the form. According to the pureness of Mercury and Sulphur, such is the influence they assume. Thus Sol is ingendred of most pure fine Mercury, and a pure red Sulphur, by the influence of the Sun: and Luna is made of a pure fine Mercury and a pure white Sulphur by the

the influence of the Moon. Hence it is that Luna is more pure than the other fine Metals, which have need of cleanfing; being cleanfed, they need but only the pure Sulphur, with the help of Sol and Luna. Sulphur is the form of Sol and Luna, and the other Metals; their other parts are gross

matters of Sulphur and Mercury.

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than we do: they when they reap their Corn growing on the Earth, gather it with the Straw and Ears. The Straw and Ears are the matter, but the Corn or Grain is the Form or Soul. But when they fow their Corn, then they fow not the matter, which is the Straw and Chaff; but the Soul or Porm, which is the Corn. So, if we will reap Sol or Luna, we must use their Form or

Soul, and not the matter.

XXI. The Form or Soul is made by Gods help after this manner. You must make a good Sublimate, that is feven times sublimed: the last time of the feven, you must sublime it with Cinnabar without Vitriol, and it will be a certain Quinteffence of the Sulphur of that Antimony. When this is done, take of the finest Sol one ounce; or of the finest Luna as much: file it very fine; or else take leaf Gold or Silver: then take of the aforefaid fublimate four ounces: fublime them together for the space of sixteen hours; then let it cool again, and mix them all together, and sublime again: do this four times; and the fourth time it will have a certain Rundle, like unto the matter of the White Rose, transparent and most clear as any orient Pearl, weighing about five ounces. The Sublimate will stick to the Brims and Sides of the Veffel; and in the bottom it

will be fike good black Pitch, which is the corrun tion of Sof and Luna.

XXII. Take the Rundle aforefaid, and diffolve it in most strong distilled Vinegar (i. s. Spirit) two or three times, by putting it into an Urinal and fetting it in B. M. for the space of three days. every time pouring it into new Vinegat (1. a. Spirit ) as at the first till it be duite dissolved: then distill it by a Filter, and save that which remains in the Pot, for it is good to whiten Brass. That which paffed the Filter with the Vinegar. fet upon hot Ashes, and evaporate the moisture and Spirit of Vinegar with a fost Fire, and set it in the Sun, and it will become most white like unto white Starch; or red if you work with Sol, which is the Form, Soul or Sulphur of Luna and Sol, and will weigh a quarter of an ounce, rather more than less; fave that well.

XXIII. Take in the name of God, an Urinal half a foot high; and take of the firm Body five ounces: of the Soul or Sulphur of Sol or Luna. a quarter of an ounce: and of the Spirit four ounces: put all of them into the Urinal; and put on its Head or Cover, with a Receiver well closed or luted. Distil the Water from it with a most fost Fire, and there will come off the first time almost three ounces: put the Water on again, without moving the Urinal, and diffil it again, until no more Liquor will distil, which do fix or feven times, and then every thing will be Then fet the same Urinal in Horse-Dung feven days, and by the vertue and subtlety of the heat, it will be converted into Water.

XXIV. Distil or filter this Water with stripes or shreds of Woollen Cloth: a gross part will remain in the bottom, which is nothing worth: all that which is passed through the Filter congeal; which will be about four or five ounces; and save it. When you have congealed it three times, melt ten ounces of most fine Solor Luna, and when it is red hor, put upon it four ounces (some says thirteen ounces) of this Medicine, and it will be all true and good Medicine. Likewise melt Borax and Wax, and one ounce; to which put of the former Medicine one ounce: put all these upon Mercury, or any other Metal, three pound, and it will be most fine Solor Luna, to all judgments and assays. Thus have I ended this Process, in which if you have any practice or judgment, and know how to follow the Work, you may finish or compleat it in forty days.

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What other Faults you meet with, correct also with your Pen.

### POLYGRAPHICES

LIBER PRIMUS.

OF

# DRAWING.

CHAP. I.

Of Polygraphice in General.

Olygraphice is an Art, so much imitating Nature, as that by proportional lines with answerable Colours, it teacheth to represent to the life (and that in plano) the forms of all corporeal things, with their respective passions. This definition is clear out of the nature of the Art, being also a liberal Art, as are Arithmetick, Geomey, Astronomy, Dialing, Musick, &cc.) It is faid represent things in plano, to distinguish it from Caring, which is also a representation of natural things with ortundity and thickness.

II. It is called, in general, in Greek xeomanns, in atin Pictura, and in English the Art of Painting.

ill. It

III. It is sevenfold (to wit) in Draming, Engraving, Etching, Limning, Painting, Washing and Colouring.

IV. Drawing is, that whereby we represent the shape and form of any corporeal substance in rude

lines only.

V. It consists in proportion and passion, as it hath relation to motion and situation, in respect of Light and Vision. If to proportioned quantity, you add Colour, you will have at length the form and perfection of the Figure: so that whosoever sees it may be able to say this is a man, that a Peacock, that a Leopard; and again, this is sohn, that Thomas, a third another man, c. And by the exact performing of these things, you may depict one Fearful, another Crying and Lamenting, another Angry, another in Love, &c. and that so excellently, that the Party counterfeited may be thereby easily known.

VI. Sander for faith, This admirable Art is the Imitation of the furface of Nature in Colour and Proportion. 1. By Mathematical demonstration. 2. By Chorographical description. 3. By shapes of living creatures, 4. And by the forms of Vegetables, in all which it prefers Likeness to the life, conserves it after death,

and this altogether by the Sense of Seeing.

VII. The proportion shews the true length, breadth or bigness of any part (in known measures) in respect of the whole, and how they bear one to another: The passion represents the visual Quality, in respect of love or hatred, forrow or joy, magnanimity or cowardice, majesty or humility; of all which things we shall sheak in order.

VIII. Herein also Painting differs from Carving; for the Carvers intent is only to give the self-same quantity to his Figure, which his natural Pattern hath, with equal to the Life in Quantity only: whereas the

Painter

Painter by the help of Colours, adds a kind of Life to the Similitude, and gives not only quantin, but a Colourable refemblance alfo.

#### CHAP. II.

Of the Instruments of Drawing.

THE Infruments of Drawing are fevenfold, viz. Charcoals, feathers of a Ducks wing, black and red Lead Pencils, Pens made of Ravens quills, Rulers, Compaffes and Paffills, or Crions.

II. Charcoals are to be chosen of Sallow-wood split into the form of Pencils, and harpned to a point, being chiefly known by their pith in the middle.

Their use is to draw lightly the draught over at first, that if any thing be drawn amiss, it may be wiped out und amended.

III. The Feathers ought to be of a Ducks wing, (though others may ferve well enough) with which you may wipe out any stroke of the Charcoal where it is drawn amis, lest variety of Lines breed confusion.

IV. Black and red lead Pencils, are to go over your Draught the fecond time more exactly, because this will not wipe out with your hand, when you come

to draw it over with the Pen.

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V. Pens made of Ravens quills (but others may ferve) are to finish the work: but herein you must be very careful and exact, for what is now done amil's there is no altering of.

VI. The Ruters, which are of use to draw straight or perpendicular lines, triangles, squares or polygons, the

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the which you are to use in the beginning, till practice and experience may render them needless.

VII. Compafes made of fine Brass with Steel points, to take in and out, that you may use black or red Lead

at pleasure.

Their use is first to measure (by help of a curious scale of equal parts upon the edge of your Ruler) your proportions, and whether your work is exact which is done with the Charcoal. Secondly, To draw Circles, Ovals, and Arches withal.

VIII. Paftils or Crions are made of several Colours to draw withal, upon coloured Paper or Parch-

ment. Thus,

Take Plaister of Paris or Alabaster calcined, and of the colour of which you intend to make your Pastils with, and q.s. grind them first asunder, then together, and with a little water make them into paste, then with your hands roul them into long pieces like black lead Pencils, then dry them moderately in the Air: being dryed, when you use them, scrape them to a point like an ordinary Pencil.

And thus may you make Pastils or Crions of what colour you please, sitting them for the Faces of Men or Women, Land skips, Clouds, Sun-beams, Buildings and

Shadows.

IX. Another way to make Pastils or Crions.

Take Tabaco-pipe Clay, and with a little water temper the fame with what colour you pleafe, making feveral according to the feveral heights or Colours you intend, which mix with the faid Tabaco-pipe Clay, so much as the Clay will bear, work all well together, make or form it into Pastils or Crions, and let them dry for use.

X. A Pastil or Crion for a brown Complexion.

Grind on your stone Ceruse, red Lead, or Vermilion, English Oker, and a little Pink; to this add a propor-

proportionable quantity of Plaister of Paris burnt and finely sifted, or Tabaco-pipe Clay; mix either of them with the said Colours, and then roul them up. Here note, that Ceruse is mixed with all the other Colours also. Roul them up upon a Marble Stone, and let them be about the length of a Finger, and the

thickness of a Goose quill.

XI. These Pastils or Crions being dry, you may sharpen them (when you use them) with a Penknise to a point, so sharp that you may draw a hair. The Colour most difficult to work in this kind is Crimson, if you make use of Lake, which you may avoid by making use of Rosser: and be sure to mix Ceruse with all your other Colours and Shadows whatsoever.

After this manner with proper Compositions you may make all manner of beautifull Colours, as Greens for Landskips, and other Colours for Rocks, Grounds, Skies,

Walks, &c.

XII. A Pastil or Crion for Greens.

These Crions are made of Pink and Rice; and Maflicote and Smalt; and Masticote and Indico, with which Colours you may make them lighter or deeper as you please; remembering that where you are to temper soft or firm Colours, as Umber, Oker, Indico, &c. you are to take the less Plaister of Paris; but where the Colours are loose, there bind them stronger and faster, by adding more Plaister of Paris.

XIII. Another way to make Pastils or Crions.

Take your Colours and grind them very fine upon a Marble, and fift them through a fine Tiffany fieve: Then take a piece of Tabaco-pipe clay, and lay it on your grinding Stone, and temper it and your Colours together with strong Ale-wort. You must be very carefull not to make them too wet, but of

an even temper; like moist Clay, to roul up with your hand upon your Stone; Then take a piece of Paper, and dry them in an Oven, after the Bread is taken out; or you may otherwise dry them in a Fireshovel by degrees till they be hard enough, which to know, have a piece of paper by you, and try if they cast, which if they do, they are not dry enough, then dry them again longer till they will not cast: after which take a feather and some Sallet-Oyl, and oyl them lightly over, and so lay them to dry again, till the Oyl be drank well into them, which will make them excellent, and to work free and easie.

XIV. Observe that those Colours which bind hard of themselves, must be tempered with less Tabacopipe-Clay. Moreover, Tellow-Oker burnt and rouled up into a Pastil or Crion, and dryed with a moderate heat; and then being throughly dryed, and made very warm, and dipt into Linfeed-Oyl, and dryed again till the Oyl becomes well foaked into it, becomes most excellent. This being sharpened to a very fine point, you may draw admirably withal, and it will have that quality, that what is drawn with it, although rubbed hard with your finger or hand, it will not rub off, nor any part of it stir. And without doubt all the other Colours may be made to. have the same quality. The German-Maskers, and those of the Low-Dutch, made all their Crions with that quality nor to rub off, but were extreamly neat, brisk, lively, and (like Oyl-painting) very strong,

XV. The way and manner of using your Rastils or Crious.
Colour the paper that you intend to draw on with a Carnation or Flesh-colour, near the Complexion of the Party you intend to draw after; cover the whole paper with the said Complexion, which is made of Ceruse, Minium, and a little yellow Oker ground with

with a little Gum-Arabick. When you prepare them, make a good number of various Complexions together, it not being worth while to make one at a time; lay this Ground-colour with a wet founge, but let the Colour be so bound with Gum, that it may not stir from the paper by rubbing. This being done and dry, draw the Outscetches or first rough Draught with Coal; that being as you would have it, draw over the same lines again more perfectly with red Chalk; then with your feveral Pastils of Crions, rub in your Colours first, and after, with your fingers fweeten and mix them together; driving and confounding them one into another, after the manner of Oyl-Painters. And because many times the Criens will not sharpen to fo good a point as black or red Chalk, you must be very carefull to dofe and finish all your work at last with red and black Chalk, which you may fharpen at plea-

XVI. Another way of Drawing with Pastils or Crions

on blue Paper.

The Ground Colours are to be rubbed in first with a encil, and afterwards with a stubbed Pencil or your Finger. After the same manner you may work in Parchment exceeding neatly and curiously, so that at a small distance they may be taken for Limning.

XVII. To make white Pastils or Crions.

Take Ceruse, or ordinary white Chalk, four Ounces: Roch-Allum, two Ounces, grind them together fine, make them up into a Mass, Burn them in a

Crucible, and keep them for use.

XVIII. To the former add good Copies, Patterns and Examples of good Pictures, and other Draughts, without which, it is almost impossible, that the young Artist should ever attain to any perfection in this Art.

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Those that desire to be furnished with any excellent Patterns, Copies or Prints, may have of all sorts, whether of Humane shape, Perspective design, Landship, Fowls, Beasts, Insects, Plants, Countreys, or any other artificial Figures, exquisitely drawn, at very reasonable rates, where this Book is to be sold.

#### CHAP. III.

Of the Precepts of Drawing in general.

BE fure to have all the necessaries aforesaid in readiness, but it will be good to practise as much as may be without the help of your Rule and Compasses, it is your eye and fancy must judge without artificial measurings.

II. Then first begin with plain Geometrical Figures, as Lines, Angles, Triangles, Quadrangles, Polygons, Arches, Circles, Ovals, Cones, Cylinders, and the like. For these are the foundations of all other proportions.

III. The Circle helps in all orbicular forms, as in the Sun, Moon, &c. the Oval in giving a just proportion to the Face and Mouth; the mouth of a Pot or Well, the foot of a Glass, &c. the Square confines the Picture. you are to copy, &c. the Triangle in the half face; the Polygon in Ground-plats, Fortifications, and the like; Angles and Arches in Perspective; the Cone in Spires, tops of Towers and Steeples: the Cylinder in Columns, Pillars, Pilasters, and their Ornaments.

IV. Having made your hand fit and ready in general Proportions, then learn to give every object its due shade according to its convexity or concavity, and to

elevate

elevate or depress the same, as the object appears either nearer or farther off the light, the which is indeed

the life of the work.

V. The second Practice of Drawing, consists in forming Fruits, as Apples, Pears, Cherries Peaches, Grapes, Strawberries, Peascods, &c. with their Leaves: the imitation of Flowers, as Roses, Tulips, Carnations, &c. Herbs, as Rosemary, Tyme, Hysop, &c. Trees, as the Oak, Fir. Ash, Walnut, &c.

VI. The third Practice of Drawing imitates, 1. Beafts, as the Lamb, Elephant, Lion, Bear, Leopard, Dog, Cat, Buck, Unicorn, Horse, &c. 2. Fowls, as the Eagle, Swan, Parrot, Partridge, Dove, Raven, &c. 3. Fistes, as the Whale, Herring, Pike, Carp, Thornback, Lobster, Crab, &c. of which, variety of Prints may be bought at reasonable rates.

VII. The fourth Praxis imitates the Body of Man with all its Lineaments, the Head, Nose, Eyes, Ears, Cheeks, Hands, Arms, and Shadows all exactly proportional both to the whole, and one to another, as

well to fituation as magnitude.

VIII. The fifth Praxis is in Drapery, imitating Cloathing, and artificially fetting off the outward Coverings, Habit and Ornaments of the Body, as Cloath, Stuff, Silk and Linen, their natural and proper folds; which although it may feem fomething hard to do, yet by much exercise and imitation of the choicest Prints will become facil and easie.

IX. In drawing of all the aforegoing forms, or whatever elfe, you must be perfect, first in the exact proportions: secondly in the general or outward lines, before you fall to shadowing or trimming your work

within.

X. In mixed and uncertain forms, where Circle and Square will do no good (but only the *Idea* there-of

of in your own fancy) as in Lions, Horses, and the like; you must work by reason in your own judgement, and so obtain the true proportion by daily

practice. Thus,

Having the shape of the thing in your mind, first draw it rudely with your coal, then more exactly with your Lead or Pencil; then peruse it well, and consider where you have exred, and mend it, according to that I dea, which you sarry in your mind; this done, view it again, correcting by degrees the other parts, even to the least I da, so far as your judgment will inform you; and this you may do with twenty, thirty, forty or more papers of several things at once: having done what you can, confer it with some excellent pattern or print of like kind, using no rule or compass at all, but your own reason, in mending every fault, giving every thing its due place, and just proportion; by this means you may rectific all your errors, and step an incredible way on to perfettion.

XI. Having then good Patterns and Copies to draw by, the young Artist must learn to reduce them toother proportions either greater or smaller, and this by often and many tryals (as we shall hereafter more particularly teach) this requires great judgement, for in a Cut, you shall find neither circumscribing strokes, nor difference between light and light, or shadow and shadow; therefore serious observations are required in the sight of those things, whether coming forwards

or going backwards.

XII. The drawing after Plaister-work, done by skilful Masters, as the Gladiator and children of Francisco, the Rape of the Sabine Women, the Wrastler, the Venus of Greece, Hercules, Hermes, anatomical diffections, and other pieces of antiquity, are main and necessary Introductions to attain a perfection in draw-

ing after the life.

XIII. This done, let the young Artist now begin to exercise in drawing after the life; (for that is the compleatest, best, and most perfect Copy, which Nature has set for observation) wherein the liberty of imitation is presented in the largest latitude: and this must be arrained by much practice and diligent Exercise, adjoining the Instructions of a good Master.

XIV. In this Practice of Drawing, let there be a

perfection attained, before ever there be the least thoughts of Colours or Painting: for that afterwards all things belonging to Painting, will in a short time

be eafily and perfectly understood.

# CHAP. IV.

Of particular Observations in the Art of Drawing.

I IN drawing after a Print or Picture, put it in such a light, as that the gloss of the Colours hinder not your fight, so as that the light and your eye may equally obliquely fall upon your piece; which place at such a distance, that at opening of your eyes, you may view it all at once, the greater your Picture is, the further off you must place it to draw after: the which you must always be sure to put right before you, a little reclining.

II. Observe to draw all your out-lines at first very faint with a Coal, because if amis, you may rub them out with the feathers of a Ducks Wing, or a bit of bread, and so mend the fault the more easily, which if you lean hard and draw very black will be more difficultly rubbed out. These out-lines must be drawn true and agreeable to the Pattern, before you begin

begin to shadow any part of it. The out-lines next the light draw very soft and faint; and having drawn one feature, let it be a direction for you in some measure to draw another, by observing with your eye (and being also guided by your Reason) the distance from that to the next feature, making a small mark at the place with your Coal, and then draw it, and so the next, till the whole Figure is designed.

III. Then observe the middle of your Picture to be copied, which touch upon your paper with the point of your Coal: then observe the most perspicuous and uppermost figures (if more than one,) which touch gently in their proper places, thus running over the whole draught, you will see the Skeleton, as it were.

of the work.

But if you go on without these considerations, whereunto your Draught will tend or run; then having ended your work, you will be forced to draw the same many times over and over again, and it may be, every time to as little purpose; by the tediousness of which, your ingenuity will be dulled.

IV. Be secure of a right and true draught, though you do it slowly; what you think may be done in two or three hours, it will be better to bestow two or three days upon: by this means (though you act leisurely, yet you will act prudently, and) you will both sooner and better than can be imagined, attain the persection of what you desire.

V. These out-schetches being made, view them diligently, whether they answer your pattern apparently; for the Gestures of the life ought to shew themselves eminently in the first and rudest draughts thereof; without which, be sure your work will be faulty. VI. Having viewed these scheeches, begin to correct and amend them (where you find them amiss) and gradatim by adding or diminishing a little here and there, as you see it differ from your pattern, you will

bring it nearer and nearer to the life.

VII. Observe the distance of one Muscle or Joynt. or Limb to another, and the same in all other Accidents of the Figure: their Thickness, Bigness, Length, Breadth, Windings, Turnings, Shadows, &c. Shadow next to the light very faintly; and where you fee bold and free Touches, be not fearful in expreffing the same. In drawing a Head by the life or otherwife, observe to place your Features exactly right upon the Cross lines, whether it be a full face, or a three quarter face, as you may fee in the examples. In foreshorting, there make the Cross lines to fly upwards, where they look upwards, but bending downwards in a circular manner, where the Afpect is downwards. And having the out-lines true made by a Coal, you must then proceed to trace over again the fame lines with a Pen, drawing them more exactly; and by imitating all the Hatches, with their exact distances one from another, their croffings, turnings and winding, with much boldness and freedom perfect your defign.

This with a Charcoal you may easily do, because you may

wipe away what is amis.

VIII. In drawing after Plaister and embossed works, chose a good North light, which let descend from above, not dilating or scattering it self too much, by which you may the more pleasantly shade your work.

If the Room has a South light, put oiled Paper before the window, or if you draw by Candle-light, have a Lamp shaded with oiled Paper; for a Candle will grow lower and lower, which

which causes the shades to change, all which you would in a

Lamp.

IX. Then fet your felf down about three times as far from the Pattern as the Pattern is high; so as your eyes in a direct line may view the fame: then with a plumb line observe what parts of your Pattern appear to you, by the extending streight thereof, and how one under another they come in fight, and accordingly make your fundamental scheeches, as we have just

before taught.

X. In drawing the Muscles of a human body you must first have either the life or very good Patterns made either of Plaister, or drawn in Pictures, enough of which are to be found in Anatomical Books; but chiefly the Book of sacob Vander Gracht, compleated with many varieties and curiosities; from whence the alterations and changes, rlsing and falling, extension and contraction, and other operations of the Muscles, Arteries and particular members are in limitation of the life excellently depicted.

XI. In drawing after a naked body, all the Muscles are not so plainly to be expressed as in Anatomical Figures; but that side whose parts are most apparent and significant in the performing of any action, must more or less appear according to the force of that action.

XII. In young persons the Muscles must not manifestly appear so hard, as in elder and full grown persons: the same observe in fat men, and stelly, and such as are very delicate and beautiful. And in Women you must scarce express any at all, because that in the life they either appear not at all, or very little, unless it be particularly in some forceable action: and then you must represent them but very faintly, less you spoil the singular Beauty of the body. The like observe in little Children.

XIII. In

• XIII. In drawing of these Muscles the motion of the whole body is also to be considered: in the rising or falling of the Arms, the Muscles of the Breast more or less appear: the Hips the like according as they bend outward or inward; and the same chiefly in the Shoulders, Sides and Neck, according to the several actions of the body: all which alterations are first to be observed in the life.

XIV. The width and largeness of the Picture is alfo to be considered: about the Legs and Garments below it should be larger, shewing it slender above, as it were Pyramidal-wise, by discovering one shoulder, and hiding the other, which is shortned by turn-

ing the body.

XV. But sometimes the Figure is to be represented biggest in the upper parts, by representing either both the Shoulders, or both the Arms; shewing the one Leg and hiding the other, or both of them after one fort, as the discretion of the Artist shall see meet.

XVI. Neither ought this to be observed only in the whole Body, but even in every part: so that in the Leggs, when a Muscle is raised outwards on the one side; that which answers directly on the contrary side must be drawn in and hid, for so it appears in

the life.

XVII. The proportion of the Figure ought to be multiplied by degrees, in proportion of one to two, three, four, &c. For herein the chief skill confifteth: the diameter of the biggelt place between the knee and the foot, is double to the least; and the largest part of the thigh triple.

### CHAP. V.

Of the Imitation of the Life.

I. IN order hereunto it will be necessary (having fixed a convenient time and place) to choose a good Master, with whom you may spend two days in a week at least; or else a society of about half a score or a dozen young men, who are experienced to draw after the life, by the advice and example of whom, and your own diligent observations and care, you may come not only to mend one anothers faults, but also one anothers judgements.

II. Then choose a well-shap'd man, one of large shoulders, of a fair breast, strongly muscled, full thighs, long legs, and of a proportionable heighth, not too tall not too short, nor too thick nor too slender, but a person every ways of an admirable shape.

III. Let this Exemplar be made to stand in a good posture, representing some noble action of the life, letting the head turn it self to the right side if the less the shadowed; and contrariwise, making the parts of the apparent shoulder somewhat higher than that which is obscured; and the head if it looks upwards, leaning no farther backwards than that the eyes may be seen; and in the turning of it, let it move no farther than that the chin may only approach the shoulder; making also the hip on that side the shoulder is lowest, a little to stick out; and that arm foremost, where the leg is behind, and contrariwise.

IV. The same you must observe in all fourfooted Beasts; and this generally to make the limbs cross-wise to cohere together; and in the turning of it for-

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ward, backward, upward, downward, fideways, ever to counterballance it by the opposition of other parts, the right knowledge of which is a great step to the

Imitation of the life.

V. This done, let him, whose turn it is to begin, first schetch on the paper his own Idea's (being fixed in a convenient place and light, as in the former Chapter) wherein you must endeavour to make every part to agree with the whole, first in form, secondly in proportion, thirdly in action: after this begin again, running over your Draught, bring it to a con-

clusion, as we shall hereafter teach you.

VI. Observing always, that after you have schetche your whole Figure, that you choose a part (which you most desire to finish) to perfect the same, in regard that with the rest stands in a good posture; the reason is, because time will not always easily permit to finish or compleat a whole Figure, unless it be with expert Artists: it being much better to perfect a part than to leave the whole imperfect; which as each Practitioner arrives and draws nearer to perfection, he may with so much the more boldness, security and certitude attempt the compleating of the whole:

VII. You are also to consider after what manner you would have your Figure to be seen, whether upon even ground, or from alost; for accordingly you

must make the position of your Exemplar.

VIII. Let the young Artist also at his conveniency, sometimes view the Country, and practise upon the drawing of Landskips, as much representing Nature (1. in their distance, 2. in their mutual position, 3. in visible aspect) as possible may be: by this means he will come to have a general and compleat understanding in the universal measures of all things.

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IX. In drawing of the Face confider the circumference thereof, and whether it be round or long, fat or lean, great or finall, so that ye be fure in the first place to take rightly the dimensions and bigness of the Face. In a fat face you must make the cheeks to swell out, and so make the Face look as if it were square. If it be neither too fat nor too lean, it will be round for the most part; but if it be a lean Face, the jaw bones will stick out, and the cheeks fall in, and the Face will be long and thin or slender.

X. Observe when you draw the outmost circumference of a Face, to take the head and all with it, otherwise you may be deceived in drawing the true bigness of a Face: and then you must judiciously consider and view all the gentle master-touches, which give the Spirit and life to a Face, and discover the Grace, as fections and dispositions of the mind, wherein lies the excellency of the Art, and glory of the Artist.

XI. A fmiling countenance is differenced in the corners of the mouth, when they turn up a little: A staid and sober countenance in the Eyes, when the upper Eye-lids come somewhat over the balls of the Eyes. A frowning countenance in the forehead, by the bending of the Eye-brows, and some sew wrinkles between the two Eye-brows about the top of the Nose.

XII. A laughing countenance is from the universal composition of the whole Face, so also an angry countenance, which is discerned by extraordinary frowning. There are also some touches about the Eyes and Mouth, which you must diligently observe, thereby giving a kind of life and spirit to your Draught.

XIII. A graceful posture is a mighty thing to be observed in every Picture, that all things be express with proper Actions; to wit, in their true and natural

ture

ral Motions, according to the life and spirit of it. In a King, express Majesty, by designing him in such a graceful Posture, as may cause the Spectators to behold him with reverence. A Soldier express in such a Posture, as bespeaks the greatest courage, boldness and valour. Make a Clown in a sordid and clownish Posture. A Servant or Page, as one waiting with the utmost diligence. And in all your draughts, make the inward affections of the mind, to be lively express in the outward actions, motions, and Gestures of the Body.

XIV. But to attain to the exquisite knowledge of these things you must diligently observe the works of the most famous Masters, and strive to imitate their examples, who of a long time had accustomed themselves to draw all varieties of Gestures and Postures; as the actions of Wrastlers, fighting at Cuffs, Stageplayers, Fencers, the inticeing allurements of Curtizans, riding the great Horse, Turnaments, &c. wherein the motions of the Eyes and Hands, and the carriage of the whole Body, are exactly to be remarked, if you would in your drawings, express any thing to the life.

XV. But that this may appear the more natural, and not forced, you must observe in your Draught, a kind of Carelesses and Loosness, that the Bodybe not made stiff in any part, but that every joynt may have its proper bendings, that the intention of the Figure may not be lame, and the joynts as it were starcht, but that every limb may have its proper freeness and loosness, agreeable with the natural life of the Picture.

XVI. That every thing may thus naturally accord, you must often and diligently also observe the life. Should you draw a man turning his head over his shoulders, you must not turn or wind more than na-

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ture will admit; nor must any other action be forced beyond, or made to come short of the limits of Nature, yet it ought to be quickned to the highest pitch. As if you were to draw a Man sighting, either to strike, or avoid the stroke of his Enemy; in Running, Wrastling, Leaping, &c. be sure you do not so much overdo nature, as to express a Posture, which cannot be imitated with his natural Body.

#### CHAP. VI.

Of the Imitation of Draughts.

I. The Learner must, by many and often tryals, get a habit of Imitation; which if it be to be done with the Pen, beware of scratching and making thin and lean stroaks, but rather broad, which you shall draw from above, downwards; but according to the shades, some of the hatches must be sharp, some broad, some unequal, and some equal.

II. Hold your Pen or Pencil formewhat long, (and not so upright as when you write,) seeming as though you laid it straight forward and if they be passils, accustom your self to turn them in your hand; by this means you will prevent their becoming so soon blunt, and they wearing to a point may serve without scra-

ping the making of a whole Draught.

III. In shadowing of your Draught, you must first begin to do it faintly and smoothly, and straight against the edges of the light, so that it may look as if it had been dasht with a brush-pencil; and then here and there overshadow it again in the darkest shades farther out, and adorn it with hatchings; and where any thing

thing more is required, put the same in nimbly and clearly by gentle touches, the which will add a great

grace unto your work.

IV. Doefling (which is a certain befineering of the work) is to be done with Crions of red or black Chalk, touching the Draught eafily all over smoothly and evenly with the points thereof, and not with Cotton or the like put up into Quills, as some use: though that may be done in some cases, as where one work is to be brought into another.

V. If Copies be taken (chiefly upon coloured paper) to make it curious and neat, let the edges of the heightning be fmoothed a little (not with cotton, but) with the like coloured paper rouled up to a sharp point at one end, and by this means you will take away the sharpness and hardness of your edges, and

make them look fweet and pleafant.

VI. In performance of these things a certain kind of washing is sometimes necessary, performed with Pencils dipt in some coloured liquor, and so laid upon coloured paper; and this is to be done either through the whole work, or in a part thereof, to wit, in some principal statishades; which may be afterwards loosly wrought over with a Pen or black Chalk, the which

will look very pleafantly.

VII. This washing must be first done very weak and faint, yet smooth (without smoothing of it at the edges, except by a new stroak of your pencil moistened with your tongue; for much smoothing will spoil your work) this first washing being dry, go over again with your work, yet only those parts where there ought to be a darker shade; and afterwards again give some deeper and harder touches without smoothing, the which will very much set your work off.

VIII. Faint shadows, and things obscure, must be presented as faintly as may be, chiefly upon coloured paper, where the heightning helps you; but beware you go not too often over your shades, lest you spoil them, by making them too hard and ill-

favoured.

IX. In drawing, whether it be after a Draught or the Life; first observe the thing in general, in respect of the circumferent stroaks; for them are they, which bound and contain all the parts of the whole, and without which the particular parts can never be perfectly distinguished, nor represent themselves in their being: This done, then consider in like manner the parts, and supposing the parts each to be a whole; you may come to represent the parts of parts, and by the same means to express the whole of any Draught whatsoever.

#### CHAP. VII.

Of Drawing the Face of a Man.

I. IN drawing of the Face you are first to observe its motion whether upwards, downwards, forwards, or fideways; whether it be long or round, fat or lean, great or little.

For if it be fat, the cheeks will feem to swell: if lean, the jaw-bones will stick out, and the cheeks fall in; but if neither too fat nor too lean, it will be for the most part

round

II. Touch lightly the features where the eyes, mouth, nose and chin should stand, (having first drawn the circle or oval of the Face) then make a stroak down from that place of the forehead which

is even with the chin, coming down where you should place the middle or tip of the nose, and middle of the mouth, which stroak must be made straight down in a full right Face, but arched or oval in an oblique Face, leaning that way towards which the Face doth turn: then cross the stroak about the middle of the eyes, either with a straight line in a right Face, or with a Curved either upwards or downwards according to the present action or posture of the Face: then make another answerable to that, where the end of the nose should come; and another for the mouth that it be not made crooked.

III. This Cross is difficult to be understood in plano, but upon a Face made upon a solid body, in form or shape of an Egg, the several variations of the said cross are most excellently demonstrated: and from hence may the Learner understand all the alterations of a Face, and thereby draw it all manner of ways, as sideways, upwards, downwards, forwards, backwards, &c. and that only by the motion of the said oval solid, accordingly as in the following Figures you

may eafily perceive.

IV. Then if the face look upwards towards Heaven, or downwards towards the Earth, let the Eyes, Nofe, Mouth and Brows look accordingly with it; and now proceed to the placing of the

Features.

V. In a just proportioned Face, the distances, 1. between the top of the forehead and the eye-brows; 2. between the eye-brows and the bottom of the nose, 3. between the bottom of the nose and the bottom of the chin are equal.

VI. In drawing the utmost circumference of a Face, take in the Head and all with it, lest you be

deceived in drawing the true bigness.

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VII. Then confider all those chief touches which give life to a face, adding grace thereto, and something discovering the disposition of the mind.

So the mouth extended and the corners a little turning up, shews a smiling countenance: the eye-brow bending, and the forehead and top of the nose between the eye-brows wrinkled, shews one frowning: the upper eye-lid coming something over the ball of the eye, shews one some formand stayed: with many other touches which give life and spirit to a face, which in good prints, by little and little, and diligent observation you will at last find out.

VIII. The diffances between the eyes, is the length of one eye in a full face, but in a three-quarter or half face, it is leffened proportionably: and exactly underneath the corners of the eyes place the

nostrils.

IX. Having given touches where the eyes, note, mouth and chin should be placed, begin to draw them more exactly, and so proceed till the Face be finished, and then make the hair, beard, shadows, and other things about it.

X. Be fure to make the shadows rightly, and be fure not to make them too dark, where they should be faint; for that can never be made light again, and

so the whole Face is marr'd.

The shadows are fainter and lighter in a fair Face than

in a Swarthy.

XI. When you have finished the Face, give here and there some hard touches with your pen where the shadows are darkest; then come the ears and hair, wherein having drawn the out-line, draw the principal curls, or master stroaks in the hair, which will be aguide to you in the lesser curls, whose dependance are on them: always make the curls to bend exactly

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according to the pattern, that they may lie loofe, or carelefly, and not as if they were stiff and forced; the curls being rightly drawn, in the last place strike in the loofe hairs which hang scatteringly out of the Circles.

XII. In forming the Ear, describe an oval as it were, and proceeding lightly, joyn stroak to stroak, in such manner as you see in the Figures; so that the ear may be entirely formed, without digressing from

the bounds of Nature or Art.

XIII. Lastly, having practised a little by rule, and brought your hand in; in drawing of any thing, first strike the out-stroaks, principal veins and muscles lightly, and afterwards shadow them, ever following exquisite patterns and prints, which will both encrease your judgement, and bring command to your hand.

#### CHAP. VIII.

# Of Drawing the Extreme parts.

I. In drawing the Hands, draw not all the joynts, veins or other things to appear plainly, but only lightly and faintly, and strike out the bigness of the hand and the manner of its turning with faint touches, and not with hard stroaks; then that being done right, part the fingers according to the pattern with like faint stroaks; then mark that place where any of the fingers do stand out from the others, with a faint resemblance: this done, proceed to draw it more perfectly, making the bending of the joynts, the wrists and other principal things more exactly; and lastly, go over with it again, drawing every small bending or swelling of the singers, nails, knuckles and veins, so many as do appear.

II. Learn by good prints the just proportions of the hands, with their equal distances, observing this rule, that according as it turns one way or another, to shorten proportionally as they appear to the eye.

For so much as it turns away from our eye, so much it loses in proportion, yea sometimes a whole singer, two or three or more is lost to our sight, which you must accordingly

answer in your draught.

III. In drawing of the feet, the fame rules which we even now enumerated, at the first and second Section of this Chapter, are to be understood here.

#### CHAP. IX.

Of Drawing the whole Body.

I. First begin with the head, and be sure to give it its just proportion, answerable to what you intend the whole body shall be; then draw the shoulders in their exact breadth; after them, the trunk of the body beginning at the arm-pits, and so drawing down to the hips on both sides, observing withal the exact breadth of the waste: lastly, draw the legs, arms and hands, exactly to your pattern.

II. But first draw with a coal, and that very lightly and faintly, drawing nothing perfect (that you may the easier mend it if it be amis) and then afterwards finish one thing after another as curiously as

you can.

III. Let the parallel finews, muscles, veins and joynts, be placed opposite one to another in a straight line (as shoulder to shoulder, hip to hip, knee to knee, &c.) for which purpose draw straight cross lines to guide you therein; observing that which way

foever

foever the body turns or bows, these lines may an-

fwer accordingly.

IV. Let all perpendicular joynts, and parts also, be placed in a right line one under another (as they are in your pattern) for which end, draw a straight line (if the body be straight) from the throat thorow the middle of the breast and privities, to the feet, to which line draw all those particular points parallels, that the body may not appear crooked or

awry.

V. In bowings and bendings of the body, let the extuberance of the outward part be just equal to the compression of the inward part; making all things of an equal proportion, that as opposite parts may be equal (as the arm to the arm, leg to leg, &c.) so every part may be proportionable to each other, (as the hand not too big for the arm, nor the arm for the body, nor the body for the legs, &c.) only with this difference, that (as the one part may appear fully to the eye, or the other may turn away either in part or in whole, or be seen side-way) it be made so much less than the other, by so much as it turns away from the sight.

VI. As you observe a just proportion in bigness, so also in length, that as every opposite part be of equal length, so that each part may not be too long one for another, but according to the proposed magnitude: And in this case that if the body be awry, or any ways hid, those parts may shorten accordingly, to

what is out of fight.

VII. Observe the just distance of one thing from another, for by that means you will be more exact in your draught; and in short time, perfectly imitate

your pattern or nature.

VIII. If you be to draw a labouring man, you must without any regard of the season, represent him with raised limbs, and strong Muscles swelling and standing forth, sweating and burning, especially in such as carry burthens, draw great weights, or use vehement Leaping, Walking, Jesting with Weapons, Fencing, and such like exercises.

IX. Laftly, But to fuch as are fleeping, you must be careful to give no such kind of Actions in their lying, as will not in probability give them leave to sleep: for being represented with their limbs or bodies supported by their own force, and not by the help of another thing, it shews the weakness and indiscretion of the Artist.

## CHAP. X.

# Of Drawing a naked Body.

I. In drawing after the life, as there are variety of faces, so no certain Rules can be delivered for the same; yet the following precautions may be useful.

H. Draw out the head in an oval, one fourth part for the hair, one fourth part for the forehead and brows, one fourth for the nose, and the last for the mouth and chin.

III. Having drawn out the head, measure out eight times the length of the head (the head making one of the eight parts) and draw a straight line from the top of the head to the sole of the foot.

IV. One heads length from the chin is for the breaft; the next eighth part reacheth to the navel, the fourth part to the privities, the fifth part to the middle of

the thigh, the fixth part to the lower part of the knee. the feventh to the small of the leg, and the eighth

part to the heel.

V. The muscles you must observe to draw exactly as they are in the life: the breadth of the shoulders, is about two measures of the head: the breadth of the hips, two measures of the face: the arms stretched out, are just the length of the whole figure, the breasts also accounted; but without the breasts they are but fix.

VI. The arms hanging straight down reach within a foan of the knee: the length of the hand is the just

length of the face.

VII. Observe first to draw the head exactly, and next, the shoulders in their just breadth: then draw the trunk of the Body, and the rest as at the first Section of the ninth Chapter.

VIII. Be fure to place the joynts, finews, and mufcles in their natural places, and also proportionately; in respect of Magnitude, Similitude, and Parts: lest it feem crooked and deformed.

IX. See that every parallel joynt bend moderately,

fo as to answer in nature its opposite.

X. Lastly, It will be extreamly advantageous to draw very much after the life, and after good prints of Anatomy, and statues and Anatomies made of Plaster of Paris, which is the only way to arrive at the perfection of drawing a naked Figure well, and without which indeed, you can never expect to be a good Artist. The Picture also ought to be, quick, free, and lively; and if you have many of them in one piece, they ought to be so ordered, as that they may not seem to be crouded, or to fall offensively, but ordering them gracefully (on the fore ground especially) so to manage the whole, that the rest of the Figures decline cline and lessen proportionably and by degrees, both in height or magnitude and strength, according to their several distances.

#### CHAP. XI.

Of Shadowing a Naked Body.

I. The Shadows of the Neck, in a child or young woman, are very fine, rare and hard to be feen: In a man, the finews and veins are expressed by shadowing of the rest of the neck, and leaving them white: the shoulder is shadowed underneath: the brawn of the arm must appear full and white, shadowed on one side.

II. The veins of the back of the hand and the knuckles are made with two or three hair stroaks with

a fine touch of the pen.

III. The paps of a man are shewed by two or three stroaks given underneath, in a woman with an orbicular shade, somewhat deep; the ribs retain no shadow except you represent one lean or starved.

IV. The belly is made eminent by shadowing underneath the breast bone and the slank: The brawn of the thigh is shadowed by drawing small hair stroaks from the hip to the knee, and crossed again overthwartly.

V. The knee is to be finely shadowed underneath the joint; the shin-bone appears by shadowing one

half of the leg with a fingle shadow.

VI. The ankle-bone appears by shadowing a little underneath (as in the knees) and the sinews thereof must seem to take beginning from the midst of the foot; and to wax bigger as they grow nearer to the toes.

VII. Lastly,

VII. Lastly, the shadows of the foot must take place according as reason and occasion requires, for which (as also in all the former precepts) the having of good prints will be no small advantage unto you

#### CHAP. XII.

The way and manner of Shadowing.

I. IF it be a furface only, it is best shadowed by drawing lines either straight or oblique, (according as the superficies is ) through the better half

thereof.

II. If it be in a Body, it is a double shadow, and is used when a superficies begins to forsake your fight, as in Columns and Pillars, where it is double darkned, and representeth to the eye, as it were the backside, leaving that unshadowed to the light.

III. The treble shadow is made by croffing over again the double shadow, and is used for the inward parts of things, as in clefts of the Earth, Wells, Caves,

the infides of Pots, Cups and Dishes.

IV. In shadowing, let the shadow always fall one way, that is, on the same side of the Body; leaving the other to the light.

So in drawing a man, if I begin to shadow his right cheek, I must shadow the right part of his neck, arm, side, thigh,

leg, &cc.

V. But if the light fide of the body be darkened by the opposition of some other body standing between the light and it, it must receive a contrary shadow, according as the light is obsuscated.

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So if three Pillars stand together, that in the midst must

receive a shadow on both sides.

VI. All circular bodies must have a circular shadow (by the first Section of this Chapter) according to their form or appearance, and the orbicular shadow of the object which casteth it.

VII. Let your shadow grow fainter and fainter, according to the greatness of the distance from the o-

pacous Body shadowing.

And the reason is, because all shadows are pyramidal, in which case, space of place prevails with the light against the

Chadow.

VIII. Where contrary shadows concur, let the meanest and most solid body be first served; and in double and treble shadows, let the first lines be very dry for fear of blotting, before you cross them.

IX. All perfect lights receive no shadow at all; but being manifest, are only to be made apparent by that body which receives them; whose shadow must be according to the efflux of light: but the colour of the light ought to agree with the medium which receives it, whether it be Air, Crystal, Water, Amber, Glass, Transparent-wine, or the like.

X. Some Artists have used a little too much White, yet with a certain kind of Grace, although their work has been much lighter than the Pattern, in the lightest part of the Body; but then withall they made the shadow as much too much in the obscure parts, where the light fell by reflexion to set forth the decay of light in the same part of the Body, by this means the work seems to be much raised, thereby deceiving the sight. For the light which comes to the Eye in a Pyramidal form, comes with a blunter and larger angle, and so represents the object the more evidently, whence comes a wonderful Eminency; the

Chapi 13. Of Palkans in the Countenance 33 cause of which is, for that there is much more shadow than needs in that part where the light decays most, so that the Visual lines failing, that part comes to the eye with a more acute angle, and therefore cannot be seen so perfectly, but seems to fly inwards, and stand farther off.

# CHAP. XIII.

# Of Expressing Passions in the Countenance.

I. Love is expressed by a clear, fair and pleasant L. Countenance, without clouds, wrinkles, or unpleasant bendings: giving the forehead an ample height and breadth with majestick grace; a full eye with a fine shadow at the bottom of the eye-lid, and a little at the corner: a proportionable nose; nostrils not too wide: a clear cheek made by shadowing of it on one side: and a similing mouth made by a thin upper lip, and shadowing the mouth-line at the corners.

II. Fear is expressed by making the eyes look hollow, heavy and downward, thin fall cheeks, close mouth, and staring careless hair about the ears.

III. Envy is belt decyphered by the only hanging of the cheeks, and a pale countenance; and forme-

times by grinning of the teeth.

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IV. Let every Parlion be represented according to the outward appearance thereof, as it is in those persons in whom it reigns; observing the rules at the fixth Section of the leventh Chapter.

V. If you defign a perfection in this Art, you must endeavour to chuse out the Best Actions for every purpose, in restraining the luxurious sury of Nature D

by a deliberate discretion, which you ought to have in the Idea; by the benefit whereof, you will finish your defign with delight and contentment, always expressing in each Member, a certain hidden resemblance of the principal motions, which affect the Eye and Soul of the Spectators, and merit the chiefest

commendation.

VI. To express a passion truly, you ought to give every thing and part its proper motion, or that which best besits your intention, which is nothing else but the agreement of proportion and form, to the nature and matter of the Action or Passion intended, wherein consists the whole spirit and life of the Art, which by Artists is sometimes called the furz, sometimes the Grace, and sometimes the excellency of Art: For hereby you put an evident difference between the swing and the dead, the sierce and the gentle, the wise and the simple, the sad and the merry; and in a world discover all the several passions and gestures which mass body is able to perform.

VII. But there things are impossible ever to be exactly done in a Picture, till you have first carefully beheld the life that thereby you may come as near the same as possible may be; to which adding Art withal, you will meet with no motions so potent, which you will not be able Artificially to imitate: There things will be the more exactly accomplished, if you be often seeing, and continually practifing what you have seen: by this means you will unawares attain to a most exact habit of doing well, and lively express all Gestures, Actions and Passions subject to natural

Bodies.

VIII. The pathons of the mind, are certain motions proceeding from the apprehension of some moving or powerful object; now this apprehension is threefold.

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threefold, viz. Sensitive, Rational and Intellectual. From these three, there arise three principal passions in the mind, viz. Pleasures of the senses; moral Virtues, or Vices; and a pious, Religious life, or irreligious and

wicked.

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IX. From the particular passions or affections of the mind, as Lave, Hatred, Desire, Fear, 707, Hope, Sorrow, Despair, Considence, Boldness, Impudence, Constancy, Fortitude, Timorousness, Valour, Anger, Pleasantness, Innocency, Hamility, Patience, &c there arise so many kinds of actions; exactly to imitate which you ought to observe carefully, the motions of the Body, by which they are outwardly expressed, and so accordingly to distribute and dispose of them in your Picture, as you have observed them in nature: which if you fail in, you pervert the Order of nature and of things; run your self into consultion, and so lose the beauty of your work.

#### CHAP. XIV.

# Of Human Proportion.

The length of an upright body is equal to eight times the length of the face or head: The arm hanging straight down, reacheth within a span of the Knee: The length of the hand must be the length of the face: The arms extended must be the just length of the body.

Whosever (lasth Vitruvius) will proceed in his works with judgment, must needs be acquainted with the nature and force of proportion. For all designs carry with them so much the more grace and beauty, by how much more ingenically they are proportioned: this being well understood

makes a man not only an excellent judge of ancient and modern Artists and their Workmanship, but also an admirable Inventor and performer of rare and excellent things himself, It adds Majesty and Beauty to his designs, and draws his

Invention many degrees on to perfection.

II. Those parts of the body near to the Eye must be made greater and longer than those farther off, (because the eye judgeth so of them) and according to the distance from the eye, so must you vary from that which is otherwise the real true proportion of those.

It is almost impossible to do any thing in the Art of proportion commendably, without the knowledge of Arithmetick and Geometry; wherefore the knowledge of these Sciences is required as a thing most necessary: for how otherwise should any one understand the exact measure and proportion of a Body?

III. To make a side way head.

You must first form an equilateral Triangle, in what position you please, turning the Triangle, to make the face upon one of the three fides, be it which it will, either upwards or downwards, higher or lower, dividing that fide into three equal parts: the one to serve from the lower part of the Hair to the lower part of the Forehead: the second thence to the up per part of the Nostrils, the third to the lower part of the Chin: now having framed these three lines draw a little crooked stroak with a Coal, Chalk, or Black-lead Pencil out of the right line, which may reach from the top of the Forehead unto the Eye brow, from whence draw the flope line, bending at the end. To make the Nose (either long, short, groß, or thin, as you defire it, ) let it end at the fe cond distance where the Nostrils are to end. Then fubdivide the remaining third part in the midft, where the

the mouth shall be placed for the parting of the upper and under lips: Then frame the Chin, having respect to the perpendicular line, that it fall not out of the middle of the Chin, adjoyning thereto, the under Chin, down to the Throat-pipe or Gullet; with the other two dividing lines, (the one from the top of the forehead downwards, ending in the midst of the back part of the Ear; and the other proceeding upwards from the Chin, ascending till it meets with the fuperiour descending line,) guide your self in describing the Ear, taking beed that its circumference stretch not out too far about the upper part of the forehead, describe a great circular line, by which form the roundness of the head, to the nave of the Neck, observing the natural proportion, and form thence downwards the rest of the Neck. Observe alfo that the tip of the Ear exceeds not the lower part of the Nostril.

IV. To describe the fore-right Face.

Form a perfect Oval, which divide in the midft with a line the longest way (viz.) a perpendicular line, which divide into three equal parts, allowing a fourth of one of the three parts for the Hair in the forehead. So have you the first third part for the Forehead and Hair; the fecond third part for the Nofe; the third third part for the Chin: In the midst thereof must the mouth be formed, always remembring that the Eyes must be in one line; the cross line of the Nose and Mouth must always be correspondent to the cross line where the Eyes are placed; the Eyes must be the length of one Eye distant from another, and their inward corners let be exactly perpendicular over the out-fide of the Nostrils. To make the Ears, they must be much foreshortned, by foreshortning: viz. for that the Eye doth not fee their extended latitude, it must be abbreviated or drawn in; and the length of the Ear must be from the Eye-brows to the bottom of the Nostrils; then describe the neck with the Hair according to their natural situation.

V. To draw a Head foresbortned.

To do this with Frets, Grates, Squares, or Geometrical Instruments breeds only a confusion of lines, for that this face can scarcely be measured by any rule, unless the whole body be framed together. In this case therefore, make a circular draught (much like to that in the foreright face) with the aspect upwards or downwards as in the foreright head, where the transverse lines are straight, but these are drawn circularly. If the head slies upwards the traced strokes and the divisions must ascend or rise upwards; but if it looks downwards, then they must all decline downwards; with this caution that the Ears and Eyes fall not out of their due points, as you may see in the example.

VI. In foreshortning you must take things as they appear to the eye, and not to draw the full proportion of each part, but to shorten all, according to the rate

or reason which they are obsuscated.

So if you would draw a Ship foreright, there can oppeat but only her forepart (for the rest being hid cannot be express;) the like of an horse looking stull to tary face or a may lying along. I must here of magistry foreshorsen, to express the Visual property: And in this safe your energy and trasforming be your chief guide to give the stue reason and madine of these appearances, whether in Drawing, Looning or Painting

VII. The use of this foreshortning is to appress all manner of actions in Man or Beast; to represent many things in a little room; to shew at one view to the eye and mind, the whole body of a Temple; with all its Arches and Pillars, whether the infide or our ide, as also the sundry sides of Caties, Caltles and Fores, and such like.

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VIII. In every case you must make Nature the pattern of all Draughes, so that nothing be expressed but what doth agree and accord with nature; and that nothing be either forced beyond nature, nor yet any thing to come short of nature.

As if in drawing the picture of a Man, be fare you draw not such a posture as is impossible for him to imitate with his natural body.

always rather imitate the visible proportions of things; than their proper and natural proportion by measures for the Eye and understanding together, being directed by the Perspective Art, ought to be your guide in Drawing and Painting. And therefore in all foresthortnings there must be a proportion observed according to the judgment of the Eye, that What limbs or parts of any thing do appear, may agree in proportion, as well as in foreshortning.

Xo If you make a fide-face without any prescribed measure, or Triangle; you ough however to consider in your mind the natural distances and proportions, and by drawing many without a Rule or Limit, you will easily do it by the eye, and your hand will draw all things right by custom. And those first stroaks or Draughts being taken from the life, and reduced by the Pencil with colours, you will find it very correspondent and like, and as exact as you can desire in

XI. The Proportion of a man of ten Faces.

From the top of the head to the foal of the foot is divided into ten equal parts. The first distance begins at the top of the Head, and reaches to the root of the Chin. The second from thence to the Throat-pin: The third thence to the parting of the breasts: The fourth thence to the Navel: The fifth thence to the Privities, which is just the middle of the

length of the Body: From thence to the foal of the foot are five parts more; whereof two are between the Privities and the mid-knees, and three more to

the foal of the foot.

XII. The first of the ten parts which is for the face, is to be divided into three equal parts: the first beginning at the upper part of the forehead, and ending upon the upper cross line of the Eye-brows: The second distance reacheth from thence to the bottom of the Nose: the third reacheth to the bottom of the Chin, which is the first and uppermiss division. Now in a fore-right sace be sure to place the Eyes, the length of one Eye distant from another, and the length of one Eye, the bottom of the Nose is to be.

XIII. The breadth of this Body confifts also of ten Faces, viz. between the extremities of both the middle fingers, when the arms are extended or spread a broad: and it is thus divided. The hand from the end of the middle finger to the Wrist, is the length of a Face, (or one of the tenth parts:) From the wrist to the elbow a face and half: From the elbow to the shoulder joint, two faces: thence to the Throat pit, one face: the hands have the proportion of one face: The Nipples must be placed at the distance of a face and half from each other, equal to the distance between the Wrist and the Elbow.

XIV. The compass of the head from the Eye-brows to the neck behind is double to the length of the whole head. The compass of the wast is the distance of three faces to the diameter thereof, and is all one with the trunk of the body. The circumference of the Body under the Arm-pits, and the space between them and the wrists, answer in a double proportion,

and is agreeable to half of the Body.

XV. The

XV. The measures which are equal between themselves. 1. The space between the Chin and the Throatpit, is equal to the diameter of the Neck. 2. The circumference of the Neck is equal to the distance of the Throat-pit from the Navel, 3. The diameter of the Wast is equal to the distance between the knob of the Throat, and the top of the head, and that is equal to the length of the foot. 4. The space between the Eye-lids and the Nostrils is equal to that between the Chin and the Throat-bone. 5. The frace from the Nose to the Chin is equal to that from the Throat-bone to the Throat-pit. 6. The distance from the hollow of the Eye-brow and from the Eyebrow, to the center of the Eye, is equal to the prominency of the Nostrils, and the space between the Nostrils and the end of the upper lip. 7. The distance between the top of the nail of the forefinger. and the joint next the Palm or Thumb, is equal to the distance between the said joint and the wrist 8. The greater joint of the forefinger is the height of the forehead. 9. The space between that joint and the top of the Nail, is equal to the length of the Nose, from the tip to the Arch above the eyes. where the forehead and the Nose is divided. 10. The two first joints of the middle finger, are equal to the space between the Nose and the Chin.

XVI. 1. The first joint of the middle finger whereon the nail grows, is the distance between the Nose
& the Mourh. 2. The second joint answers to the first
which is equal to the space between the mouth and the
chin. 3. The bigger joynt of the Thum is equal to the
length of the mouth. 4. The space between the top of
the Chin, and the dint under the lower lip, is equal to
the lesser joint of the Thumb. 5. The least joint of each
singer is double the length of the Nail. 6. The spaces

between

between the middle of the Eye-brows, and the outward corner of the Eyes, is equal to the spaces between the said corners and the Ears. 7. The height of the forehead, the length of the Nose, and the distance of the Nose from the Chin are equal. 8. The breadth of the Hand is equal to the breadth of the Foot. 9. The length of the Foot is equal to the measure round about the instep. 10. Twice the breadth of the hand,

is equal to the length thereof.

XVII. 1. The arches of the Eve-brows are equal to the arch of the upper lip, at the division of the mouth. 2. The breadth of the Nose is the length of the Eye, and are either of them equal to half the length of the Nole. 3. The Navel is in the middle between the Nose and the Knee. 4. from the top of the should der to the elbow is equal to two Faces, and from them rothe wrift one and a half. 5. The breadth of the Body at the broadest-part of the shoulders is two faces and half, which is also equal to the distance between the elbow and the end of the middle finger. 6. The breadth of the body at the Privities is equal to two faces 7. Thighs at the thickest part hear the Privities, are the distance of two Faces broad. 8. The thickest part of the Leg is equal to the space between the top of the Forehead and the end of the Note: 9. The breadth of the back at the Arm-pits is equal to two faces, and so are the hips at the buttocks. The length of the middle finger is equal to the force between its last joynt and the wrist."

NVIII. The proportions of a young mun of nine Faces.

A flender young body of nine heads, is equal to mine times the space between the top of the head and the end of the chin, that being a ninth part of the length of the whole body. And thence back again to the root of the hair a tenth or eleventh part: but which

which way soever you draw it, this space is also divided into three equal parts, whereof the first makes the forehead, the second the nose, the third the chin. However, in a face for the eleventh part, is a tust of hair, which is usually exprest, so that the forehead becomes lower by a third part, which rule the Ancient Grecians always observed.

XIX. The proportions of a man of eight Faces.

First draw a straight perpendicular line of the length you design the Figure, which divide into eight equal parts; the uppermost part of which is the length of the head, in which it behoves you to be very exact, because the whole body must answer in proportion to it. That eight part make into an Oval, which divide into four equal spaces; the first shall be for the hair, the second for the forehead, the third for the nose, the fourth from the lower part of the nose to the bottom of the chin. But drawing after the Life, you need not follow this Rule exactly, for nature is extreamly various in her Representations. Having drawn the head, there remain feven parts more from the bottom of the chin to the foal of the foor. The diffance of the chin to the breaks is the denigh of the head. The third division reaches to the smallest part of the waste. The fourth to the Privities. The fifth to the middle part of the Thigh. The fixth to the middle part of the Knee. The feventh to the small of the Leg. The eight to the heel and fole of the Foot. In the several parts all the other proportions answer.

1) XX The Proportion of a Body of feven Heads.

The length from the crown of the Head to the fole of the Foot is feven times the length of the head: this is a large Head, and all the Members and Limbs are answerable to it, viz. Strong, Sturdy, and Raised.

Yet the Ancient Gracians painted only the Goddes Vesta with this proportion, it being grave and Matron-like. But you may give it to any other Goddess, which has any kind of grave, or folid Resemblance, as also to the more staid and Ancient sort of Women, to Sibylls, Prophetesses and such like, whom to draw with a slender and delicate proportion would be a great oversight: As also to draw a Prophet with the proportions of a young man.

XXI. To make a Child of fix Heads, you must divide the whole length of the Body into fix parrs, whereof the Head must be one. To draw a Child of five Heads, you must divide the whole length of the body into five parts, whereof the Head must be one. To figure out a Child of four Heads, you must divide the whole length of the Body into four equal parts.

whereof the Head must be one.

# CHAP. XV.

# Of Drapery.

I. D Raw the out-lines of the Garment lightly, and herein be careful, for the whole grace of the picture lies there; then draw the greatest folds first, and stroke those into lesses, and be sure they cross one another.

II. Sute your garments to the body and make them bend with the body, according as it stands in or out, straight or crooked, or turns one way or another: the closer the garment sits to the Body, the narrower

and smaller must the folds be. it most suggested

III. All your folds must consist of two lines and no more, which you may turn with the garment at pleasure; shadowing the innermost deeper, the outermost

most more light; and if the folds be never so curiously contrived, spare not to shadow them (if they fall inward from the light) with a double or treble shadow, as the occasion requires.

IV. The greater folds must be continued through the whole garment, the lesser you may break off and

shorten as you please.

V. The shades of silk and fine linnen are very thick and small, which require little folds and a light and rare shadow, commonly but double at most; and so also sine Drapery requires more and sharper folds than course.

VI. That part of a garment which fits elose to the body must not be folded at all, but only sweetly shaded, to represent the part of the body which lies

under it.

VII. Observe the motion of the Wind and Air, for driving loose apparel all one way, drawing that part of the garment first, which lies highest and closest upon the body, before you draw the looser part that flies off from the body, lest by drawing the loose part of the garment first you should be out, and so place the body crooked or awry.

VIII. You ought also to examine the nature and disposition of light, especially as it has relation to the Sun, or any bright body; for that colours cannot be seen but in the light; and by the help thereof they

appear with a grace.

IX. Suppose Bine be equally dispersed through all the parts of a Garment, so that there is no more in one part than in another; yet notwithstanding when it is illustrated by any light, it causeth one kind of brightness in that part where it striketh strongly; another kind of lustre where it strikes more weakly; and another in that part, where it yet shines less.

X. Now

X. Now to imitate this Blue; you must take your Artificial Blue colour; and temper it one way to express the natural Blue of the Garment: but another way to express it in the light: vie. You must mix so much White with your Blue, as you find light in that part of the Garment, where the light strikes; more White where it strikes with the greater force; and less White where it strikes with less; and still in proportion less and less, till you come to the parts where the light shines not.

XI. Where the light shines not but by Reflection, there you shall only mix so much shadow with your Blue, as shall be enough to express that counterfeit light, loosing it self as it were by degrees; always providing that you make your light and shadow to

answer.

XII. The Folds or Plaits ought to run out every way like Branches or Arms from the body of a Trees and to be so made that one plait may so rise from another, as one Branch or Bough, or one stream of Water, comes out from another, in such fort that there be no part of the Garment, wherein there appear not some of these folds.

XIII. Now these motions should be moderate, gentle, and free, without any interruption, more to be admired for their grace and facility, than for affected pains and industry: and because all sorts of cloths have their several motions, as well as Bodies; it must needs be, that they differ between themselves, according to the things wherein they disagree.

XIV. For this cause, there must be more light in fine Cloth, as Sarcenet, Linnen, Cambrick, Cypress of in which the plaits are small, raised up, trembling, and as it were sweetly waving, somewhat puffed

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puffed up, by extending and spreading themselves like a Sail, where the motion receiveth more strength by the Wind, they sall close upon the bare skin, as you may see in Womens Garments, upon whom by reason of their thinness, they sall close upon the parts on that side where the Wind bloweth, but are blown up on the contrary side: The same salls out in Mantles, the loose ends of Girdles and Garters; all which motions more sitly appertain unto the Apparel of Nymphs, Goddesses, &c. in respect of their lightness and airiness.

XV. Gross and dull shadows are found in stiff Cloths where the Plaits are few and gross, so that they are capable but of slow motion, and therefore they fink downwards, and can scarcely fall close to the bare skin, for that their own grossness sustains them; and these motions do mostly appear in cloth of Gold, thick Leather, course wollen Cloth etc., up-

on which the air can have little or no force.

XVI. Moreover the Plais or folds must have their morions accordingly as they are managed by the wearer, as under the arm, and under the knee, by opening and stretching out the arm and leg; ever making hard, stiff, and gross folds, without weakness or pliableness, in such fort, that by their appearance, the nature and quality of the Garment may be known.

XVII. But mean motions, which are neither too gross, nor too flight, are such as appear in the folds of Stuff, and other cloths of fine Wool; and these may easily enough be moved by the air, or become pliable to a mans limbs; and so make not only most sweet and pleasant solds, but follow the bare stell very well, becoming moveable and aimble, and falling pliably about the loins, or any other part.

XVIII. But

XVIII. But besides these, there are also other kinds of mixt motions, called turnings and crossings, which are proper unto Damasks, Tassataes, Sattins, Cloth of Gold, &c. in which folds, crossing and breaking one another, appear, from the various natures, qualities and conditions of the Drapery: but these things are so to be performed, that they may not savour of an over-affected imitation, without grace or order, to the scandal of the Artist and his designs.

# CHAP. XVI.

Of mixed and uncertain Forms.

I. For the drawing the form of any beast, begin with your lead or coal at the forehead, drawing downward the nose, mouth, upper and nether chop, ending your line at the throat; then viewing it again where you begun, from the forehead, over the head, ears, and neck, continuing till you have given the full compass of the buttock, then mark out the legs and feet: Viewing it again, touch out the breast with the reminency thereof; Lastly, finish the tail, paws, tongue, teeth, beard, and several shadows.

II. In drawing Beafts you must be well acquainted with their shape and action, without which you shall never perform any thing excellent in that kind: and here if you draw it in an Emblem or the like, you ought to shew the Landskip of the Country natural to that beaft.

III. In Birds begin also the draught at the head, (and beware of making it too big (then bring from under the throat the breast-line down to the legs, there stay and begin at the pinion to make the wing, which being

being joined to the back line will be presently finished: the eye, legs and train must be at last, letting always (in birds as in beafts) the farthest leg be shortest; their feathers (as the hair in beafts ) must take their beginning at the head very small; and fall in one way backwards in five ranks, greater and greater to the conclution.

IV. Infects, as flies, bees, walps, grafhoppers, worms, and fuch like, are easie to be drawn and not hard to be laid in Colours; in doing thefe, it will at first be absolutely necessary to have the living pattern

before your eyes.

V. To draw a flower, begin from the boss tuffe or wart in the middle; as in a Rose or Marigold, with the yellow tufft, which being made, draw lines equally divided, from thence to the greatest compass or extent of your flower: you may draw them either fully o pen, or in the bud, and laden with dew, wet and Worms, and then you may draw rudely with the coal or lead the leaves afterwards, giving them their veins or jaggedness,

VI. To take the natural and lively shape of the leaf

of any Herb or Tree.

First, take the leaf that you would have, and gently bruise the ribs and veins on the back fide of it afterwards wet the fide with linfeed Oyl, and then press it hard upon a piece of clean white Paper; and so you shall have the perfect figure of the faid leaf, with every vein thereof to exactly exprest, as being lively coloured it will from to be truly natural.

be different as whether in he

Honse or ele like, there no particular A A H S unt dillipedion : fine rether and is and confeledly as the Law Laketh of

# CHAP. XVII.

# Of Landship.

L Andskip is that which expresses in lines the perfect vision of the earth, and all things there inpon, placed above the Horizon, as Towns, Villages, Caltles, Promontories, Mountains, Rocks, Valleys, Ruins, Rivers, Woods, Forests, Chases, Trees, House and all other Buildings, both beautiful and ruinous.

II. First, Always express a fair Horizon, shewing the heavens cloudy or clear, more or less according to the occasion; and if you express the Sun, let it be either assisting or setting, and as it were behind or over

some hill or mountain.

The Moon and Stars are seldom or never depicted, unless it be in representation of twilight; because all things are sup-

posed to be seen by day.

III. Secondly, If you express the Sun, make his light to reflect upon all the Trees, Hills, Mountains, Rocks, or buildings; shading the contrary side, after which manner also shadow clouds, mists, and the like, making the shadows to fall all one way.

IV. Thirdly, be very careful to augment or lessen every thing proportionably to their distance from the

eye making them either bigger or leffer.

V. In expressing things at large distances, as tentwenty or thirty miles off; where the object is hard to be discerned, as whether it be Temple, Castle, House or the like, shew no particular signs thereof, or any eminent distinction; but rather as weakly, faintly, and consused as the eye judgeth of it.

VI. If

VI. If Landskips be laid in Colours, the farther you go, the more you must lighten it with a thin and airy blue, to make it seem as if it were afar off, beginning at first with a dark green, so driving it by degrees into a blue, according to the distance.

VII. Make your Landskip to shoot (as it were) away, one part lower than another, making the nearest hill or place highest, and those that are farther off, to shoot away under that, that the Landskip

may appear to be taken from the top of an hill.

VIII. Let every thing have its proper motion, as in Trees when they are shaken with the wind, making the smaller boughs yielding; the stiffer less bending: in Clouds that they follow the Winds: in Rivers, the general current, and flashing of the Waters against the boat fides: in the Sea, the waves and other proper agitations, the rowling of the Billows, the tumbling of Veffels up and down; Ships floating, some dipt, fome half-drown'd, fome standing almost an end, some hid almost with the Waves, through the uncertainty of the Surges, others endeavouring to live: In the motion of Waters falling from an high place, but especially when they fall upon Rocks or Stones, you must make it leaping up into the Air, and sprinkling all about. And lastly, let every thing which moveth, whether effentially of accidentally, have its proper representation.

IX. Let your work imitate the feafon you intend

it for.

As if you intend it for a winter piece, represent felling of Wood; sliding upon the Ice; fowling by night; hunting of Bears or Foxes in the Snow; making the Trees every where naked or laden with a hoar frost; the Earth hare without greenness, Flowers or Cattle; the Air thick; F. 2

Water frezen, with Carrs passing over it, and Boys upon it,

&c.

X. Lastly, let every site have its proper parery, adjuncts, or additional graces, as the Farm-house, Wind-mill, Water-mill, Woods, Flocks of Sheep, Herds of Cattle, Pilgrims, Ruines of Temples, Castles and Monuments; with a thousand such other only proper to particular subjects.

# CHAP. XVIII.

Of Diapering and Antique.

I. D lapering, is a tracing or running over your work again when you have, as it were, quite

done, with damask branches, and fuch like.

It is used to counterfeit cloth of Gold, Silver, Damask, Velvet, Chamlet and the like, with what branch and in what sashion you please: it is derived from the Green word diamecia, transco, to pass over, and only signifies a light passing over the same again.

II. If you Diaper upon folds, let your work be broken off accordingly, and taken as it were by the

half.

For reason sheweth that the fold covereth something which cannot be seen by reason of it, which if it was drawn out at

length would appear plain.

III. Let the whole work be homogene; that is, let the same work be continued throughout the whole garment, setting the fairest branch in the most eminent and perspicuous place, causing it to run upwards, for else your work would be ridiculous.

IV. You may either shadow the ground and leave your work white; or shadow your work and leave the

ground

ground white; and as you shall please in this kind, your filling may be with small pricks, which will shew

very fair.

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V. Antique (ab antes) are buttereffes whereon the building is flayed, as also the outwardmost ranges; used in fore-fronts of houses, in all manner of Compartments, curious Architecture, Armours, Jewels, and Columns.

VI. The form of it is (only for delights fake) a general or irregular composition of men, beasts, birds, tithes and flowers and such like, without either rule

or reason.

VII. Laftly, observe the continuation of one and the same work, through the whole piece, without the

least change or alteration.

As if it be naked Boys, playing, lying, sitting, or riding upon Goats, Eagles, Dolphins and the like; strings of Pearl, Satyrs, Tritons, Apes, Dogs, Oxen, bearing or drawing Fruits, Branches, or any wild fancy after your own invention, with a thousand such other idle toys; be sure you observe the continuation,

#### CHAP. XIX.

To take the perfect draught of any Picture.

I. Take a sheet of fine Venice Paper, wet it all over with linseed oyl on one side thereof, which then wipe off as clean as you can; let the Paper dry, and lay it on any painted or printed Picture, then with a black-lead pen you may draw it over with ease: put this oyled paper upon a sheet of clean white paper, and with a little pointed stick or feather out of a swallow's wing, draw over the stroaks which

you drew upon the oyled paper; so shall you have the exact form upon the white paper, which may be

fet out with colours at pleasure.

II. Or thus, The picture being drawn as before in the oyled paper, put it upon a sheet of white paper, and prick over the drawing with a pen: then take some small coal, powder it fine, and wrap it in a piece of some sine linnen, and bind it up therein loosely, and clap it lightly all over the pricked line by little and little, and afterwards draw it over again once or twice, with pen or pencil.

III. Or thus, Rub a sheet of white paper all over on one fide with black-lead; or else with vermilion mixed with fresh butter; lay the coloured side upon a sheet of white paper, then lay the picture you would copy out upon the other side of the coloured paper, and with a small pointed stick or swallows quill, go over all the stroaks of your picture, and it will be ex-

act on the white paper.

IV. Or thus, Lay a piece of Lanthorn horn upon the picture, then draw the stroaks of your picture with a hard nibbed pen upon the horn; and when it is dry, breath upon the horn twice or thrice, and press

it hard upon white paper a little moistned.

V. Or thus, Take an oyled sheet (as at the first Section of this Chapter) rub one side of it with lamb black or lake; lay it upon a sheet of fair paper with the coloured side downwards, and upon it lay the platter you would copy out, and trace it over with a swallows feather.

VI. Or thus, Take fine lake mixed with linfeed oyl, and draw with it, instead of Ink, all the outbroaks of any picture, and other material parts; then wet the contrary side of the picture and press it hard upon a sheet of paper, and it will leave behind it all that which you drew over.

VII. Or

VII. Or thus, Grind Printers black fine, and temper it with water, and with a pen dipt in it, draw over the out-lines and master stroaks: wet then some white paper with a spunge or the like, and press it hard thereupon; and you shall have the stroaks you drew upon the white paper.

VIII. Or thus, Lay the print (the back-fide of it) upon a clear glass, or oyled paper, then lay a clean paper upon the print; hold it up against the light, so will you fee all the stroaks which you may draw out,

and shadow also if you please.

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IX. To take the shape of any Leaf, Herb, or Plant.

Hold a whole Leaf or Sprig (as of Nettles, Plantane, &c.) in the smoak of Gum Sandrack, Rosin, a Link, or Wax-candle, till it is well blackt, which place between the leaves of a sheet of white paper, and carefully press upon the Leaf with some smooth thing; so shall you have in a moment the print on the paper, (especially the backside thereof) with the very Ramifications of the Fibres dispersed through it. This may be of good use in Travelling, when we meet with strange Plants.

X. To take the Picture of an Herb, from an old Picture. Take Venice Soap, dip it in water, and rub or moisten the old Picture all over, and very well with it: then put upon it a piece of white paper, with other paper over it, and rub hard thereupon, or press them strongly together, and the old Picture

will come offexactly upon the white paper.

# CHAP. XX.

To extend or contract a Picture keeping the proportion.

L Noompass your picture with one great square, which divide into as many little ones as you please: this done, according as you would have your picture either greater or less, make another square greater or less, which divide into as many equal squares which let be drawn with a black-lead plummer.

II. Take your black-lead pen, and draw the picture by little and little, paffing from fquare unto fquare (by the example of the pattern) until you have gone all over with it: observing that in what part of the square the picture lies, you draw the like part in the square answerable thereto, till you have finished the whole.

Iff. Then draw it over with a pen, in which second drawing of it you may easily mend any fault,

and fhadow it at pleasure.

IV. Last, When it is throughly dry, rub it over with the crum of white-bread, and it will take off all the black-lead stroaks, so will your draught remain fair upon the paper.

# CHAP. XXI.

Of Perspective in general.

OTTIKH' in Greek, Perspectives in Latin, the Art of seeing in English; is that by which we behold, pointemplate, and draw the likeness of all magnitudes, just

just in form and manner as they appear to the Eye.

II. The matter to be seen or speculated is a magnitude: the manner of speculation is by radiations of

Light, either direct, reflected or broken.

III. A magnitude is that which hath form; and it is either lineal, superficial, or solid; that is, either a complication of points, a complication of lines, or a complication of superficies.

VI. A line is a complication of points; that is (according to *Euclid*) a length only without either

breadth or thickness.

V. A superficies is a complication of lines; that is,

a length having breadth without thickness.

For as the continuation of points makes a line: so the couching of lines makes a superficies: which is only the laying of points cross wise.

VI. A folid is a complication of superficies; that is, a length and breadth, having depth or thickness.

And indeed it is nothing but the continuation of points

when a superficies either perpendicularly or bending.

VII. The Contemplation of the Object represents the matter to the mind, in the same manner as its outward appearance doth to the Eye.

And from hence comes fudgment where by the Artist is enabled to describe the same in lines; and delineate it, ac-

cording to its apparent or visual proportions.

VIII. To draw or describe the Appearance in lines is the active part of this Art, whereby the *Idea* conceived in the mind (by fight and contemplation) is brought to light.

IX. A radiation is a beam of light, conveighing the likeness of the thing, to the Eyes, or fight; and the knowledge thereof to the mind or understanding.

And this radiation is twofold, either external from the external light, or intellectual from its being and power.

X. Direct radiations are those which consider the direct or streight beams, which pass between the eye and the object.

And this is the first kind of perspective; and is many

times (alone) called the Opticks.

XI. Reflected radiations are those which consider the reflection of beams, and their shape upon any polish'd body, as on a Globe, Cone, Cylinder, Pyramid, or any regular solid.

And this is the second kind of Perspective; which is cal-

led the Art Catoptrica.

XII. Broken radiations are those which consider the breaking of beams, as they are to be seen through a glass or a Crystal cut into several plains or superficies.

And this is the third and last kind of Perspective, which

is called the Art Dioptrica.

# CHAP. XXII.

Of the Active part of Perspective.

I. THe active part of Perspective is either Ichnographical, Orthographical, or Scenographical.

II. Ichnographia, is the description of the plain base or bottom of any body or building.

III. And it is twofold, to wit, either Geometrical or Scenographical.

IV. Ichnographia Geometrical, is that which gives the fight of the bottom or base of any body or building.

So a Circle is the base of a Column; and a square is the base of a Pedestal, and the like; but this Geometri-

Chap. 22. The active part of Perspective. 59

cal Ichnography is not feen in Section, or through a Glass, unless it lies parallel to the base; and so it makes no Section with it.

V. Ichnographia Scenographical is the Appearance of the fame base in Section, or through a Glass, erected upright on the same plain, on which the base stands.

And by this the said base is extended in length but con-

tracted in breadth, for so it appeareth to the eye.

VI. Orthographia, is the vision of the foreright side of any plain; to wit, of that plain or superficies which lies equidistant to a right line, passing through the outward or convex centers of both eyes, continued to a due length.

And therefore Perspective Orthographia, is the deli-

neation of the apparent right plain.

Scenographia is the description of a plain or other figure, that declines from the apparent or foreright plain; that is of that plain which makes Angles with

the said foreright plain.

The Scenographick vision of any form, body or building is, of that side which declines from, or constitutes an Angle, with the right line, passing from the convex centers of both Eyes aforesaid: this Artists call the return of the foreright side. Now the difference between the Orthographick and Scenographick vision is this; the Orthographick shews the side of a body or building as it is beheld when the plain of the Glass is placed equidistant to that side: but the Scenographick shews the side of a body or edifice as it appears through a glass raised obliquely to the said side, or making an angle therewith.

# CHAP. XXIII,

Of the Subject to be feen.

I. THe Base of any thing is the plain, flat, or floor upon which any folid body, or object is placed, or raised.

II. The Altitude or height is the perpendicular space of place, between the base and eye, or height of the visual point above the base.

III. The Vifual point, is a point in the Horizontal

line, wherein all the beams of the eyes unite.

Exempli gratia. If you look on a long straight River, the sides of which run parallel, yet by reason of the distance both sides of the River (although it be very broad) will seem to incline, touch and unite with each other in one common point or Center: and so if you look on a long straight brick-wall, the several lays of Brick, and courses of Mortar, will (at a great distance) seem to incline each to other in one common Point or Center; this point reslected on a glass raised upright on the base, is called the visual point.

IV. The Horizontal line is a line proceeding from the center of the Eye to the vifual point, parallel to

the Horizon of the Earth.

And this is, in men of ordinary height or stature, com-

monty about five foot from the ground or base.

V. The Distance is the space on the base between the Glass and point in the base which lies directly under

the eyes

VI. The Section is a plain of transparent or perlucid matter (as of Glass) raised upright upon the plain of the base standing before you, parallel to a straight line, passing through the convex centers of both Eyes.

Without Without the knowledge of this Section or Glass it is utterly impossible to understand perspective, or know what it means: Or be able to give a reason for the difference between

the Orthographick and Scenographick figure.

VII. If the Glass is placed near the visual point, and far from the object, the figure which is seen will be very small: and the reason is, because all rays comprehending the Orthographical and Scenographical figures (though more remote from the object) fall into the visual point, as their common center.

VIII. If the vifual point be more elevated (though at the fame diffance) the Scenographick figure or form will appear of a much larger magnitude: because the vifual radiations being higher, the various perpendiculars raised on the Section or Glass, cut them in wider distances, because more remote from the

Glass.

I.

IX. If the Glass incline to the visual point, the Scenographick vision will be long-wife between the visual point and the object.

And the reason is, because the plain of the Glass heaps

in more of the visual Radiations.

X. If the Glass recline from the visual point, the Scenographick figure will appear rounder, and begin

to resemble the Orthographick.

XI. But if the Glass is fixed equidiffant to the base, or plain the object stands upon; the Scenographick and Orthographick resemblance will be one and the same.

And the reason is, because the form of the figure is lost,

or not visible in the Section.

XII. The Visual Raises, are those lines which proceed from the visual point, through the Glass, to any point higher or lower than the plain of the Horizon.

XIII. Diagonal,

XIII. Diagonals, or lines of distance, are such as are drawn from the point of distance to any other point higher or lower than the Horizon.

XIV. The Object, is that form, figure, body or edifice intended to be expressed in Perspective proportions.

# CHAP. XXIV.

The General Practice of Perspective.

I. Let every line which in the Object or Geometrical figure is straight, perpendicular, or parallel to its base, be so also in its Scenographick delineation.

H. Let the lines which in the object return at right Angles from the fore-right fide, be drawn Scenographically from the Vifual point.

III. Let all straight lines, which in the object return from the fore-right side, run in a Scenographick figure into the Horizontal line.

IV. Let the object you intend to delineate standing on your right hand, be placed also on the right hand of the visual point: and that on the left hand, on the left hand on the same point: and that which is just before, in the middle of it.

V. Let those lines which are (in the object) Equidistant to the returning line, be drawn in the Scenographick figure, from that point found in the Horizon.

VI. In setting off the altitude of Columns, Pedestals and the like, measure the height from the base-line upward in the front or foreright-side; and a visual ray drawn, that point in the front shall limit the altitude of

the

Chap. 24. The general practice of Perspective. 63

the Column or Pillar, all the way behind the foreright fide or Orthographick appearance, even to the vifual point.

This rule you must observe in all figures, as well where there is a front or fore-right-side, as where there is none.

VII. In delineating Ovals, Circles, Arches, Croffes, Spirals and Crofs-arches, or any other figure, in the roof of any room; first draw Ichnographically, and so with perpendiculars, from the most eminent points thereof, carry it up unto the Ceiling, from which several points carry on the figure.

VIII. The center in any Scenographick regular figure is found by drawing cross lines from opposite angles: for the point where the Diagonals cross is the

Center.

IX. A ground plain of squares is alike, both above and below the Horizontal line; only the more it is distant above or beneath the Horizon, the squares

will be so much the larger or wider.

X. In drawing a perspective figure, where many lines come together, you may for the directing of your eye, draw the Diagonals in red; the visual lines in black; the Perpendiculars in green, or other different colour from that which you intend the figure shall be

XI. Having confidered the height, distance and position of the figure, and drawn it accordingly, with side or angle against the base, raise perpendiculars from the several Angles or designed Points in the sigure, to the base, and transfer the length of each perpendicular, from the place where it touches the base, to the base on the side opposite to the point of distance; so will the Diametrals drawn to the perpendiculars in the base, by intersection with the Diagonals drawn to the several transferred distances, give the

the angles of the figure: and fo lines drawn from point to point will circumscribe the Scenographick

figure.

XII. If in Landskip there be any standing Waters, as Rivers, Ponds, and the like; place the Horizontal line level with the farthest fight or appearance of it.

XIII. If there be any houses or the like in the picture, consider their position, that you may find from what point in the Horizontal line to draw the from

and fides thereof.

XIV. In describing things at a great distance, obferve the proportion (both in magnitude and distance) in draught, which appears from the object to the

eye.

XV. In colouring and shadowing of every thing, you must do the same in your Picture which you observe with your eye, especially in objects lying near; but according as the distance grows greater and greater, so the colours must be sainter and fainter, till at last they lose themselves in a darkish sky colour.

XVI. The Catoptricks are best seen in a common looking-glass or other polish'd matter; where if the glass be exactly slat, the object is exactly like its original: but if the glass be not flat, the resemblance alters from the original, and that more or less, according

ding as the glass differs from an exact plain.

XVII. In drawing Catoptrick figures, the furface of the glass is to be considered, upon which you mean to have the reflexion; for which you must make a particular Ishnographical draught or projection; which on the glass must appear to be a plain full of squares, on which projection transfer what shall be drawn, on a plain divided into the same number of like squares:

where though the draught may appear very confused, ver the reflection thereof on the glass will be very re-

gular, proportional and regularly composed.

XVIII. The Dioperick or broken beam may be feen in a Tube, through a Crystal, or Glass, which hath its furface cut into many others, whereby the raies of the object are broken.

For to the flat of the Crystal or Water, the raies run freight; but then they break and make an Angle, the which also by the refracted beams is made and continued

on the other side of the same flat.

XIX. When these faces on a Crystal are returned towards a plain placed directly before it, they separate themselves at a good distance on the plain; because they are all directed to various far distant places of the same.

XX. But for the affigning to each of them a place on the same plain, no Geometrick rule is yet in-

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V.V. What the Coos on C. His are returned on as a plant to direction for they fepated formitives and additional on the plants become new areas on the plants become one of the distinct places of the female.

XX. But for the alliquing to each of them a place of the fame plate, no Geometrick rule is yet up-

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# POLYGRAPHICES LIBER SECUNDUS.

# Of Engraving, Etching, and Limning.

Shewing the Instruments belonging to the Work; the Matter of the Work, the way and manner of performing the same; together with all other Res quisites and Ornaments.

# CHAP. I.

Of Graving, and the Instruments thereof.

I. C Raving is an Art which teacheth how to transfer any defign upon Copper, Brass, or Wood, by help of sharp pointed and cutting Instruments.

II. The chief Influments are fout, 1. Gravers, 2. An Oyl stone, 3. A Cushion, 4. A Burnisher.

III. Gravers are of three forts, round pointed, square pointed

pointed and Lozenge pointed. The round is belt to firstch withal: the square Graver is to make the largest stroaks: the Lozenge is to make stroaks more sine and delicate; but a Graver of a middle size betwixt the square and Lozenge pointed, will make the stroaks or hatches shew with more life and vigour, according as you manage it in working.

IV. The Oyl-stone is to whet the Gravers upon, which must be very smooth, not too soft, nor too hard.

and without pin-holes.

The use is thus: Put a few drops of Oil Olive upon the stone, and laying that side of it, which you intend shall cut the Copper, flat upon the stone, whet it very flat and even; and therefore be sure to carry your hand stedfast with an equal strength, placing the forefinger firmly, upon the opposite side of the Graver. Then turn the next side of your Graver, and whet that in like manner, that you may have a very sharp edge for an inch or more. Lastly, turning uppermost that edge which you have so whetted, and setting the end of the Graver obliquely upon the stone. whet it very flat and floping in form of a Lozenge ( with an exact and even hand) making to the edge theraof a (harp point. It is impossible that the work should be with the neatness and curiosity desired, if the Graver be not, not only very good, but also exactly and carefully whetted.

V. The Cushion is a leather bag filled with fine fand, to lay the plate upon, on which you may turn

it every way at eafe.

You must turn your plate with your left hand, according as the stroaks which you grave do turn, which must be at-

tained with diligent care and practice.

VI. The burnishing Iron is of use to rub out scratches and specks or other things which may fault your work in the plate; as also if any stroaks be graved

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too deep or gross to make them appear less and fainter by rubbing them therewith.

VII. To make your Gravers.

Provide some cross-bow steel, and cause it to be beaten out into small rods, and softned, then with a good sile you may shape them at pleasure: when you have done, heat them red hot; and straight dip it into Soap, and by so doing it will be very hard: where note that in dipping them into the Soap, if you turn your hand never so little awry, the Graver will be crooked. If your Graver be too hard, take a red-hot Charcoal and lay the end of your Graver upon it till it begins to wax yellowish, and then dip it into tallow (some say water) and it will be tougher.

VIII. Have by you a piece of Box or hard wood, that after you have sharpned your Graver, by striking the point of it into the said Box or hard wood, you may take off all the roughness about the points, which

was caused by whetting it upon the oyl-stone.

IX. Lastly, take a file and touch the edge of the Graver therewith; if the file cut it, it is too soft, and will do no good: but if it will not touch it, it is fit for your work.

If it should break on the point, it is a sign it is tempered too hard; which oftentimes after a little use by whetting

will come into a good condition.

# CHAP. II.

Of Polishing the Copper Plate.

I. Take a plate of Brass or Copper of what bigness you please, and of a reasonable thickness, taking heed that it be free from fire-flaws.

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II. Beat it as fmooth as you can with a hamme, and then rub it as fmooth as you can, with a pumice from void of Gravel (left it fcratch it, and so cause as much labour to get them out) and a little water.

III. Then drop a few drops of oyl Olive upon the plate, and burnish it with your burnishing Iron; and then rub it with Charcoal made of Beech wood quen-

ched in Urine.

IV. Lastly, with a roul made of a piece of a black Felt, Castor, or Beaver, dipt in oyl Olive, rub it well for an hour, so shall your plate be exactly polished.

# CHAP. III.

Of holding the Graver.

I. IT will be necessary to cut off that part of the knob of the handle of the Graver which is upon the same line with the edge of the Graver; thereby making that lower side next to the plate stat, that is may be no hindrance in graving.

For working upon a large plate, that part of the handle (if not cut away) will so rest upon the Copper, that it will binder the smooth and even carriage of your band in making your stroaks, and will cause your Graver to run into your Copper deeper than it should do. This done.

II. Place the knob at the end of the handle of the Graver in the hollow of your hand, and having extended your fore finger towards the point of the Graver, laying it a top, or opposite to the edge which thould cut the plate, place your thumb on the one side of the Graver, and your other fingers on the other lide, to as that you may guide the Graver flat and parallel with the plate.

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III. Be wary that your fingers interpole not between the plate and the Graver, for they will hinder, you in carrying your Graver level with the plate, and cause your lines to be more deep, gross and rugged, than otherwise they would be.

# CHAP. IV.

Of the way and manner of Engraving.

I. A Aving a Cushion filled with Sand about nine, inches long and fix broad, and three or four thick, and a plate well polished; lay the plate upon the Cushion, which place upon a firm Table.

II. Holding the Graver (as aforefaid) according to Art, in making straight stroaks be sure to hold your plate firm upon the Cushion, moving your hand, leaning lightly where the stroak should be fine; and harder where you would have the stroak broader.

HII. But in making circular or crooked ftroaks, hold your hand and Graver stedfast, your arm and elsow resting upon the Table, and move the plane against the Graver; for otherwise it is impossible to make those crooked or winding stroaks with that near ness and command that you ought to do.

IV. Learn to carry your hand with fuch a flight; that you may end your stroak as finely as you begin it; and if you have occasion to make one part deeper or blacker than another, do it by degrees; and that you may do it the more exactly, observe that your stroaks be not too close, nor too wide.

For your more exact observation, practise by such prims which are more loosly shadowed, lest by inner ting the more dark, you should not know where to begin or end.

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V. After

V. After you have graved part of your work, it will be needful to scrape it with the sharp edge of burnisher or other Graver, carrying it along even with the plate, to take off the roughnels of the stroaks; but in doing it, beware of making scratches.

VI. And that you may the better see that which is Engraven, with the piece of Felt or Castor (at the fourth Section of the second Chapter) dipt in oyl rub

the places graven.

VII. Lastly, whatsoever appears to be amis, you may rub out with the burnisher, and very exactly polish it with your piece of Felt or Castor and oyl, which done, to cleanse the plate you may boil it a little in Wine-vinegar, and rub it gently with a brush of small Brass-wire or Hogs bristles.

# CHAP. V.

Of the Imitation of Copies or Prints.

Aving a piece of Bees wax tyed up in a fine holland rag, hear the plate over the fire, till it may be not enough to melt the wax; then rub the plate with the wax tyed up in the rag, till you fee it covered all over with wax, (which let be very thin:) if it be not even, heat it again by the fire, and wipeit

over gently with a feather.

II. If you would copy a printed picture, to have it print off the same way; then clap the print which you would imitate with the printed fide next to the plate; and having placed it very exactly, rub the backfide of the print with a burnisher, or any thing that is hard, smooth and round, which will cause it fick to the wax upon the plate: then take off the . V. Attor

the print (beginning at one corner) gently and with care, left you tear it (which may be caused also by putting too much wax upon the plate) and it will leave upon the wax the perfect proportion in every part.

Where note, if it be an old picture, before you place it upon the wax, it will be good to track it over in every limb

with a black-lead pencil.

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III. But if you would have it print the contrary way, take the dust of black-lead, and rub the backfide of the print all over therewith, which backfide put upon the waxed plate; and with your needle or drawing point, draw all the out-lines of the design or print, all which you will find upon the wax. This done,

IV. Take a long Graver either Lozenge or round (which is better) very sharp, and with the point thereof scratch over every particular limb in the out-stroak;
which done, it will not be difficult to mark out all the
shadows as you Engrave, having the proportion be-

fore you.

V. Lastly, for Copies of Letters, go over every letter with black-lead, or write them with ungum'd Ink, and clap the paper over the waxed plate as before. See Chap. 9. Seet. 20. ad 25. following.

# CHAP. VI.

Of Engraving in Wood, salled Carving.

I. The figures that are to be carved or graven in Wood must first be drawn, traced, or pasted upon the wood; and afterwards all the other standing of the wood (except the figure) must be cut away with little narrow pointed knives made for that purpose.

This

This graving in wood is far more tediens and difficult than that in Brass or Copper; because you must cut twice or thrice to take out one brooks and having out it, to be careful in picking it out, left now should break any part of the work, which would deface it.

II. For the kind of the wood let it be hard and tough: the best for this purpose is Beech and Box: let it be plained inch thick; which you may have cut into pieces according to the bigness of the figure

you grave.

HI. To draw the figures upon the wood.

Grind white lead very fine, and temper it with fair mater; din a cloath therein, and rub over one fide of the wood and lot it dry throughly: This keepeth the Ink (if you draw therewith) that it run not about, nor fink, and if you draw with Pastils, it makes the stroaks appear more plain and bright.

IV. Having whited the wood as before (if it is a figure you would copy, ) black or red the blank fide of the print or copy, and with a little stick or fwallow's quill, trace or draw over the stroaks of the

figure.

V. But if you paste the figure upon the wood, you must not then white it over (for then the figure will pill off) but only fee the wood be well plained: then wipe over the printed fide of the figure with Gum-Tragacanth dissolved in fair water, and clap it smooth upon the wood, which let dry throughly: then wet it a little all over, and fret off the paper gently, till you can fee perfectly every stroak of the figure: dry it again, and fall to cutting or carving it.

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# CHAP. VIL

Of Etching, and the Materials thereof.

I. Tching is an artificial Engraving of Brass or

Copper-plates with Aqua fortis.

II. The Instruments of Etching (besides the plate) are thirteen. 1. Hard Varnish. 2. Soft Varnish. 3. Prepared Oyl. 4. Aqua fortis. 5. Nocdles. 6. Oyl-stone. 7. Brush-Pencil. 8. Burnisher. 9. A Scraper. 10. Compasses. 11. Ruler. 12. Stift. 13. The Frame and Trough.

III. To polish the plate.

Although in Chap. 2. of this Book, we have fufficiently taught how to polish the plate, yet nevertheless we think it convenient to subjoyn these following words. First, the plate being well planished or forged, choose the smoothest side to polish; then fix it upon a board a little declining, and rub it firmly and evenly all over with a piece of Grindstone, throwing water often on it, so long till there be no dints, flaws, or marks of the hammer: wash it clean, and with a piece of good Pumice-stone, rub it croswise to the former, so long till there be no rough stroaks or marks of the Grindstone: wash it clean again, and rub it with a fine Hoan and water croswise to the former, till the marks of the Pumice-stone are rubbed out; wash it again, and with a piece of Charcoal without knots (being heat-red hot and quenched in Urine, the outside being pared off) rub the plate with water till all the small stroaks of the Hoan be vanished; lastly, if yet there remain any small stroaks or scratches, rub them our with the end of the burnishing Iron ;

Iron; but in case they are very deep, you must make use of your Scraper, and scrape them out, and burnish them afterwards, and then lastly take a Charcoal prepared as aforesaid, and rub therewith with water, till the plate is glassed, so shall the plate be fitted for work.

IV. To make the hard Varnish for Etching.

Take Greek or Burgundy-pitch, Colophonium or Rozin, of each five ounces, Nut-Oyl four ounces; melt the Pitch or Rozin in an earthen pot upon a gentle fire; then put in the Oyl, and let them boil for the space of half an hour: cool it a little upon a softer fire till it appear like a Glewy Syrup: cool it a little more, strain it, and being almost cold, put it into a glased pot for use. Being thus made, it will keep at least twenty years.

V. To make the foft Varnish for Etching.

Take Virgin-wax three ounces, Mastich in drops two ounces, Asphaltum one ounce: grind the Mastich and Asphaltum severally very fine: then in an earthen pot melt the wax and strew in the Mastich and Asphaltum, stirring all upon the fire till they be well dissolved and mixed, which will be in about half a quarter of an hour; then cooling it a little, pour it into a bason of fair water (all except the dregs) and with your hands wet (before it is cold) form it into rouls.

Or thus, Take Virgin Wax, four ounces: Afphaltum, two ounces: Amber, Mastick, of each one ounce: the three last being in sine Powder, mix it over a gentle sire, that it may not be burnt; then taking it from the sire, put it into a pot of fair water, and make it up into Balls or Rouls, and preserve it from the dust; when you use it, take a quantity of it, and bind it up in a piece of Tassaty or Silk, and use it as hereaster we shall direct. Or thus, for a Red

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Red Ground. Take Red Lead, grind it very well, and temper it with Varnish. Or thus, for a White Ground. Take Rofin, two ounces: Wax, one ounce: melt them together, adding Venice Ceruse finely ground, two drams. Or thus, for a Black Ground. Take Asphaltum four onnces; Bees Wax, two ounces; melt them together, being warm, lay it thinly on with a Lamn' Rag. Or thus, for another Red Ground. Take Red Lead or Vermilion. grind it very well, then grind it with Linfeed Oyl; lay it on very thin, Or thus, out of a Manuscript. Take Virgin Wax, four ounces : Asphaltum, Amber, Mastick, of each two ounces (but if cold meather, but one ounce of Mastick) Rosin, Shoomakers Pitch, of each an ounce: Common Varnish, half an ounce : melting the Wax in an Earthen Pot, put in the other things by degrees, which when well mixed, make it up into Balls or Rouls, and keep it from dust for use. Or thus, from Rinebrant. Take Asphaltum burnt, Mastick, Amber, of each half an ounce : Firgin Wax, an ounce: melt the Wax and mix therewith the former things in Powder, then make it into Balls on Rouls for use: when you use it heat not the plate too hot, and lay your Black Ground very thin, and the White Ground upon it.

VI. To make the prepared Oyl.

Take Oyl Olive, make it hot in an earthen pot, and put into it a fufficient quantity of tried Sheeps Suer (fo much as being dropped upon a cold thing, the oyl may be a little hardened and firm) boil them together for an hour, till they be of a reddish colour, lest they should separate when you use them. This mixture is to make the fat more liquid, and not cool so fast, for the fat alone would be no sooner on the pencil, but it would grow cold; and be sure to put in more oyl in Winter than in Summer.

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VII. To make the Aqua fortis.

Take distilled White wine Vinegar three pints; Sale Armoniack, Bay-fak, of each fix ounces; Verdegriefe four ounces. Put all together into a large well glazed earthen pot (that they may not boil over ) dover the pot close, and put it on a quick fire, and let'it speedily boil two or three great walras and no more; when it is ready to boil, uncover the por, and ftir it fome times with a flick, taking heed that it boil notover: having boiled, take it from the fire, and let it cool be ing close covered, and when it is cold, put it into a Glass bottle with a Glass stopple: If it be too strong in Etching, weaken it with a glass or two of the fame Vinegar you made it of. There is another fort of Aque forces, which is called Common, which is exhibired in Pharmacopia Rondinonfis & Deron. because those Books may not be in every mans hand, we will here infert it; it is thus: Take dried Vitriol two pound, Salt-peter, one pound, mix them and diffil by a Retort, in open fire by degrees.

VIII. To make the Etching Needles.

Choose Needles of several fizes such as will break without bending, and of a fine grain; then take good round sticks of firm wood (not apt to split) about fix inches long, and as thick as a large Goose quill; at the ends of which fix your Needles so that they may stand out of the sticks about a quarter of an inch or something more. You ought to have twenty Needles at least; which you may fix in such sticks, as to have a pencil at the other end.

IX. To what the points of the Needles with the Ogli

Stone.

If you would have them whetted round, you must whet their points short upon the Oyl-stone (not as sowing Needles are) turning them round whilst you what

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whet them, as Turners do. If you whet them floping, first make them blunt upon the Oyl-stone, then holding them first and steady, whet them sloping upon one side only, till they come to a short and roundish oval.

X. The brush pencil is to cleanse the work, wipe off dust, and to strike the colours even over the ground

or varnish, when laid upon the plate.

MI. The burnisher is a well hardened piece of fieel formewhat roundish at the end. Its uses are what we have spoken at the fixth Section of the first Chapter, and the third Section of the second

Chapter.

XII. The feraper is one of the Instruments fitted for clearing the plate of all deep scratches or stroaks which the burnisher will not stake away; you are first to scrape them out with the scraper, (carrying your hand evenly, that you make not more work) and then afterwards to burnish upon what you have scraped

XIII. The Computer are chiefly of title to incalure and distance, or strike a Gircle, for some part or portion of a Circle, where you defire your work to be

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che straight hackes or lines of your design, upon die uplates ior, do mark out distances upon a straight lines of your design, upon die uplates ior, do mark out distances upon a straight lines upon

outmost Lines or Girconferences of the Print, "Pattern, wirdrawling which you Esch after.

and XVI. To rouge the firme and Tribable area a drive

The Franke is an fentire board, dbott whose top and fides is fastened a ledge two in the broad to keep the Agna forth from tunning off from the fides when

when you pour it on: the lower end of this board must be placed in the Trough, leaning sloping against a wall or some other thing, wherein you must fix several pegs of wood to rest the plate upon. The Trough is made of a firm piece of Elm or Oak set upon four legs, whose hollow is four inches wide; and so long as may best fit your use: the hollow must be something deeper in the middle, that the water running thither way fall through a hole (there made for that purpose) into an earthern pain well Leaded the inside of this board and trough must be covered over with a thick of colour, to hinder the Aqua sortis from eating we rotting the board.

# CHAP. VIII.

The way and manner of using the hard Varnish.

I. Having well heat the polished plate over a Chafing dish of coals, take some of the first varnish with a little stick, and put a drop of it on the top of your finger, with which lightly touch the plate at equal distances, laying on the varnish equally, and heating the plate again as it grows cold, keeping it carefully from dust or filth; then with the ball of your thumb tap it upon the plate; still wiping your hand over all, to make it more smooth and equal.

And here beware that neither the varnish be soo thick

upon the plate, nor your hand freaty. To said floride

II. Then take a great lighted candle burhing clear, with a short sinus; (placing the corner of the plate against a wall) hold the varnished side downward over the candle, as close as you can so at touchnot the varnish, guiding the slame all over, till it is all

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perfectly black, which you must keep from dust or

filth till it is dry

III. Over a fire of Charcoals hang the varifihed plate to dry with the varifih upwards, which will imoak; when the smoak abates, take away the plate, and with a pointed stick scratch near the side thereof, and if the varifih easily comes off, hang it over the fire again a little, so long till the varifih will not too easily come off; then take it from the fire and let it cool.

If the varnish should be too hard, cast cold water on the back-side of the plate to cool it, that the heat may not make it

too hard and brittle. This done,

IV. Place it upon a low desk, or some such like thing, and cover that part which you do not work on, with a sheet of fine white paper, and over that a sheet of brown paper, on which may rest your hand, to keep it from the varnish.

V. If you use a ruler, lay some part of it upon the paper, that it may not rub off the varnish; and have an especial care; that no dust or filth get in between

the paper and the varnish, for that will hurt it.

#### CHAP. IX.

The way and manner of Etching.

I. IN making lines or hatches, fome bigger, fome leffer, ftraight or crooked, you must use several forts of Needles, bigger or leffer, as the work requires.

If The great lines are made by lessing hard on the

II. The great lines are made by leaning hard on the Needle; its point being short and thick, (but a round point will not cut the varnish clear:) or by making divers lines, or hatches, one very close to another, and then

then by passing over them again with a thicker needle, or by making them with an indifferent large needle, and letting the Aqua fortis lie the longer thereon.

The best Needles for this work are such as are whet su ping with an oval because their sides will cut that which the

round ones will not.

III. If your lines or hatches ought to be of an equal thickness from end to end, lean on the needle with an equal force; leaning lightly where you would have the lines or stroaks fine or small; and more heavy where you would have the lines appear deep or large; thereby the needle may have some Impression in the Copper.

IV. If your lines or hatches be too finall, pass over them again with a short round point, of such a bigness as you would have the line of, leaning strongly where

you would have the line deep.

V. The manner of holding the needle with oval points (which are most proper to make large and dep stroaks) is much like that of a pen, only the flat six whetted is usually held towards the thumb: but the may be used with the face of the oval turned toward the middle singer.

VI. If you would end with a fine stroak, you ough

to do that with a very fine needle,

VII. In using the oval points, hold them as upright and straight in your hand as you can, striking you stroaks firmly and freely, for that will add much their beauty and clearness.

VIII.InLandskips, in places fartheft from the fight, as also nearest the light, use a very slender point, leaning so lightly with your hand as to make a small

faint stroak.

IX. In working be careful to brush off all the dull which you work off with the needles.

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X. But this you are to observe, that you be able to copy any Drawing or print exactly, and to draw after good heads of Plaster, or Figures, according to your own fancy, and skilful in shadowing every thing exactly according to art: And therefore when you imitate Plaster, be sure to take the true out-lines or circumferences, and taking notice how the shadow falls, to do it very faint and soft as the design requires.

XI. Therefore it is convenient that you be able to hatch with the Pen, exactly after good Prints or Copies, and when you can perfectly do that, and draw after Plaster, then to imitate the life; but before you draw after the life, you must be very exact

and true in your out-lines or circumferences.

XII. Now to take the outmost lines in any Drawing or Print, upon the ground of the plate, you must scrape a little white lead upon the back side of it, then take a feather, and rub it over every where alike, and shake off that which remains loose. This done, take the print and lay it upon the Plate, on that side the ground is, and fasten the four corners thereof to the plate with a little soft Wax: and take the Stift, and draw upon the Print all the outmost lines or circumferences exactly; which done, take off the print from the plate, and all the same outlines and circumferences; which you drew upon the print with the Stift, will be exactly found upon the ground.

XIII. Then observe exactly how your original or pattern is shadowed, and how close the hatches joyn, how they are laid, and which way the light falls or comes in: and be sure to make the light to fall all one way; if the light falls side-ways in the Print, you must hatch the other side darkest, which is farthest from the light, and so place your lights altogether on

one fide, and not confusedly, part or one fide, and

part on another.

how they incline, and which way they twift and wind; which follow as exactly as possibly you can: but before you begin to hatch or shadow, you must be fure to draw all the outmost lines with a Needle upon the ground as artificially as you can, which shadow with your Needles of several forts, according to

your Original.

XV. When you are to make a broad stroak, then break off the point of your Needle, and whet it upon the oyl stone, four square till it comes to a point: if you hatch fine strokes then you must use fine pointed Needles: if middle sized strokes, then break off the point of a middle sized Needle, and whet it as a foresaid; and so in like manner according to all the sizes: but some Artists, in making a bold or broadstroke, hatch it first fine, and so by degrees make it broader.

Etching Land-skips.

XVI. When you etch Land skips, hatch that which is nearest to the eye darkest, and so let it loose or decline its shadows by degrees, making that which is

farthest off faintest.

XVII. The same thing you must observe in etching of the sky. For that which is nearest to the eye, must be darkest shadowed, but in general as faint and soft as may be, loosing it self by degrees as is before directed, and the nearer the sky comes to the ground, the more it must loose and be fainter: when they both meet as it were together, the sky must be quite loss.

XVIII. When you have hatched it as exactly as you can possible with your Needles, after the Printor Drawing.

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Drawing, then compare them exactly together, that you may supply any defect, or mend what is done a-

Draught or Print, beware of Perfection at a distance, and before to shadow that which is nearest to the eye, perfectest and strongest, and the farther from the eye, it must decline in length, breadth, and heighth according to Art and Proportion; letting the shadows loose, and grow fainter and fainter, gradatim, till they are nearly lost

Etching or Engraving of Letters.

XX. Screw the Copper plate (being fit for etching, by one of its corners) to a hand Vice, which hold over a Charcoal fire till it be warm: then take a piece of Virgin Wax, and rub it all over the plate, until it is covered every where alike.

XXI. This done, take a stift Ducks-wing feather (not rushed) and therewith drive the Wax even and

fmooth, every where alike, and fo let it cool.

XXII. Then write the Letters or hand, which you intend to put upon the plate, on a piece of Paper with ungum'd Ink: this paper thus written, lay with the written fide downwards, upon the waxed plate, and fasten the four corners with a little fost Wax; the writing being so placed that the lines may run straight.

XXIII. Then take a Dogs tooth, and rub the paper all over with it, not missing any place; which done take off the Paper from the plate, so will all the letters which you wrote on the papers be left ex-

actly upon the Wax.

XXIV. Take now a *Stift*, and draw all the letters through the Wax upon the plate, and take a linen rag, or Pencil brush, with which cleanse the work G 3

from the loose Wax; fo will all the letters be drawn

upon the Copper.

XXV. This, if you pour upon it good Aqua-fortu, will be etched: but if you take away all the Wax, you may better and more commendably perform it by Graving, with good Gravers well ground, and made sharp towards the points; then whetted very fmooth and sharp upon a good Oyl-stone.

## CHAP. X.

# Of using the Aqua fortis.

I. I Fthere be any stroaks which you would not have the Aqua fortis eat into; or any places where the varnish is rubbed off, melt some prepared Oyl, and with a pencil, cover those places pretty thick.

II. Then take a brush pencil, or rag, and dip it in the prepared oyl, and rub the back-side of the plan all over, that the Aqua fortis may not hurt it, if by

chance any should fall thereon.

III. Before you put the Aqua fortis to the plate, gently warm or dry the plate by a fire to dry up the humidity, which it might contract by reason of the Air; and to prevent the breaking up the varnish upon

the first pouring the Aqua fortis thereon.

IV. Place the plate by the 12th Section of the 7th Chapter of this Book, and with the Aqua fortis in an earthen pot pour upon the plate, beginning at the top, fo moving your hand that it may run all over the plate, which do for eight or ten times: then turn it corner-wise, and pour the Aqua fortis on it that way ten or twelve times; and then turn it again corner-wise the other way, pouring on the Aqua sortis eight

or ten times as before; doing thus feveral times for the space of half a quarter of an hour or more, according to the strength of the water, and nature of the Copper.

For there must be less time allowed to hard and brittle Copper for pouring on the Aqua fortis, but more to the soft.

V. But you must have special regard to cast on the Aqua fortis as occasion shall require, and as the work is; casting it on at several times, and on several places; where you would have it very deep, often; where less deep, sewer times: where light, less yet; where lighter, lesser, and where so light as it can scarcely be seen, once or twice: washit with water, and cover it where you would have it lighter.

VI. Having thus covered your plates as occasion requires; for the second time, place the plate on the frame as aforesaid, and pour on it your Aqua fortis for

a full half hour.

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VII. Then wash it with water and dry it, covering the places which require lightness or faintness (that they may be proportionable to the design) then pour on the Aqua fortis for the last time more or less according to the nature of your work, and the deepness that

it requires.

VIII. You may rub off the varnish or ground, as occasion in your work requires with a Charcoal, to see whether the water hath eaten deep enough; by which you may judge of the space of time, that you are after to imploy in pouring on the Aqua fortis, in the works you will have to do, which if the shadows require much depth, or ought to be very black, the water ought to be poured on (at the least time) for an hour or better; yet know so certain rule of time can be limited for this.

# entendines as before, doing that the difference of three formations of an hour tenders are considered as a consent of the cons

# Of Finishing the Work.

LA LL the former operations being done, wash the plate with fair water; and put it wet upon the fire, till the mixture be well melted, and then wipe it very clean on both fides with a linnen cloth, till you have cleanfed it of all the mixture.

II. Take Charcoal of Willow, take off the rind of it, and putting fair water on the plate, rub it with the Charcoal, as if you were to polith it, and it will take

offthe varnish.

Where note, that the Coal must be free from all knots and roughness and that no fand or filth fall upon

the plate.

HI. Take ordinary Aqua fornio, to which add two third parts of water, and with some linnen rags dipped therein rub the plate all over, so will you take away its discolouring, and recover its former beauty.

IV., Then take dry linnen rags, and wipe the plate fo as to take off all the aforefaid water, and then holding it a little to the fire, put upon it a little Oyl Olive, and with a piece of an old Beaver rolled up rub the plate well all over, and laftly, wipe it well with a dry cloath.

V. Then if any places need touching with the Graver, as fornetimes it happens, especially where it is to be very deep or black, perfect them with care; which done, the plate is ready for the Rolling-Press

CHAP.

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## CHAP. XH.

The way of using the foft Varnish.

I. The plate being prepared by cleanfing it with a Charcoal and clean water, wash it well and dry it, then with fine white Chalk scraped and a fine rag, rub it well over, not touching it with your fin-

gers.

II. Lay down your plate over a Chafing dish of small-coal, yet so as the fire may have air; then take the ground or soft varnish (it being tied up in a fine rag) and rub it up and down the Copper, so as it may sufficiently cover it, (not too thin nor too thick:) then take a stiff Ducks feather, and smooth it as well, as possibly you can all one way, and then cross it till it lie very well.

But you must take heed that the plate be not too hot, for if it lie till the ground smoak, the moisture will be dried up, and that will spoil the work, and make the ground

break or fly mp.

III. Then grind fome Ceruse or White-lead with Gum-water, so that it may be of a convenient thickness to spread on the Copper; and with a large pentil, or small brush, strike the plate cross over, twice or thrice till it is smooth; and then with a larger brush (made of Squirrels rails) gently smooth the white, and then let it lie till it is dry.

IV. Or you may black the varnish with a Candle, as we taught at the Second Section of the Eighth Chapter, and then if it be cold, warm it over the fire, till the varnish begin to melt, that the smoak may melt into the ground, so that you rub it not off with your

hand.

#### CHAP. XIII.

The way of Etching upon the foft Varnish.

I. The way of Etching is the same with that in the hard varnish, only you must be careful not to hurt your varnish, which you may do by placing on the sides of your plate two little boards, and laying cross over them another thin one, so as that it may not touch the plate, on which you must rest your hand whilst you work.

II. Then place the plate on a Desk (if you so please) for by that means the superfluous matter will fall away of it self.

III. But if you have any design to transfer upon the plate from any Copy or Print, scrape on the backside thereof some red Chalk all over; then go over that, by scraping some soft Charcoal, till it mingle with the Chalk; and with a large stiff pencil rub it all over till it be fine and even, and so lay down the design upon the plate: with a blunt Needle draw over the out stroaks: and as you work, you need not scratch hard into the Copper, only so as you may see the Needle go through the Varnish to the Copper.

IV. Always be fure when you leave the work, to wrap the plate up in Paper, to keep it from hurt, and corrupting in the air, which may dry the varnish: and in Winter time wrap the plate up in a piece of Woollen, as well as paper, for if the frost get to it, it will cause the Varnish to rise from the Copper in the eating.

An inconveniency also will accrew, by letting the Varnish lie too long upon the Plate before the work is finished; for three or four months will consume the moisture and so spoil all.

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V. The marking of the design upon the soft varnish, is best done with Black-lead or Chalk, if the ground is white; but with red Chalk, if the ground is black.

VI. Having Graved what you intend upon the varnish, take some fair water, a little warm, and cast it upon the Plate; and then with a soft clean Spunge, rub upon the White-lead to moisten it all over; and then wash the plate to take away the whiting, and

dry it.

VII. Or lastly, with Aqua fortis mixed with fair water, wash it all over, and by this means you may take away the whiting, which then wash with common water and dry it; and thus have you the plate

prepared for the Aqua fortis.

#### CHAP. XIV.

Of using the Aqua fortis, and finishing the Work.

I. Put foft wax (red or green) round the brims of the plate, (being first drawn into a long slender roul or string) and let it be raised above the varnish about half a Barley Corns length; so that placing the plate level, the water being poured upon the plate may by this means be retained. But that you may be sure that the Aqua fortis shall not run out, you must take a knife and heat it in the fire, and sear the wax round about under the plate, very close: and be sure to fasten the Wax as near to the edges of the plate, as you can conveniently. This done,

II. Take fingle or common Aqua fortis fix ounces, common water two ounces; mix them, and pour it gently upon the plate, so that it may cover it fully

all over; so will the stronger hatchings be full of bubbles, while the fainter will appear clear for a while, not making any sudden operations to the view.

Note, to weaken the Aqua fortis, you may also mix is with Vinepar, or a little of that Aqua fortis which has been used formerly: for if your liquor be too strong, it will make the work very hard, and sometimes make the ground to break up. The deeper the Aqua fortis lies, the harder it will eat.

HI. When you perceive the water to operate a small time, pour it off into a glazed earthen dish, keeping it to the with some other; and throw fair water upon the plate, to wash away the Ajun sortia, then they the plate; to wash away the Ajun sortia, then they the plate; and where you would have the Curto be faint, tender or sweet, cover it with the prepated Oyl, and then cover the plate again with Aqua sortia as before, leaving it on for eight or ten minutes, or longer: then put off the Aqua sortis as before washing and drying the plate, and covering with the prepared Oyl other places which you would not have so deep as the rest. Lastly, put on the Aqua sortis again, for the space of half an hour (more or less) and then pour it off, washing the plate with fair water as before.

As you would have your lines or stroaks to be deeper and deeper, so cover the sweeter or fainter parts by degrees with the prepared Oyl, that the Aqua sortis may lie the

longer on the deep ftroaks. Then,

TV. Take off the border of wax, and heat the plate, fo that the Oyl and varnish may throughly melt, which wipe away well with a linner cloth: then rub the plate over with Oyl Olive and a piece of an old Beaver roll'd up, which done, touch it with the Graver where need is.

V. But if any thing be (at last) forgotten; then rub the plate aforesaid with crums of bread, so well that no fifth or oyl remain upon the plate. VI. Then

VI. Then hear the Plate upon a Charcoal fire, and foread the foft varnish with a feather upon it (as before) fo that the hatchings may be filled with varnish; black it, and then touch it over again, or add

what you intend.

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VII. Let your hatchings be made by means of the Needles, according as the manner of the work shall require, being carefull before you put on the Aqua fortis, to cover the first graving on the Plate with the prepared Oyl, (left the varnish should not have covered all over: ) then cause the Agna fortisto eat into the work; and lastly cleanse the Place as before.

VIII. Your plate being cleanfed, if you perceive that the Aqua fortis has not eaten as deep in some places, as it should have done, you must help those

defects with a Graver.

IX. To know when the Aqua fortis has eat deep enough after it has layen a quarter or half an hour, pour off the Aqua fortis from the Plate into a Glass, wash it with a little fair water, and with a knife scrape off a little bit of the ground, where it is hatcht, and may be least prejudicial to your work; and if you find it not deep enough, cover the bare place of your Plate with your prepared Oyl, and put the Agna fortis upon leagain, letting it lye till you think it deep enough; or mix it with fome new Aqua fortis, if you think what you have used to be too weak; by many Tryals and Practice, you will at length come to a certainty.

X. Or you may make the Tryal upon a waste piece of Copper rudely hatched; pouring the Aqua forms both upon the Plate, and that at one and the fame time: after a fufficient feason, with a knife take off a little piece of the ground from the waste piece of Copper where it is hatched, and if it be not deep

enough,

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enough, cover it again with your prepared Oyl, and make a new Tryal, and so proceed on, till you find the Aqua fortis has eaten deep enough: observe to wash the Plate with a little fair water, before you warm it, for otherwise, the Aqua fortis will stain the Plate.

XI. If the ground be broken up in any place, put off the Aqua fortis from the Plate, wash it with fair water, and cover it with your prepared Oyl, then pour on the Aqua fortis again, thus will you preserve

your Plate from injury.

XII. To make your Aqua fortis work harder of lofter, you must cover those places of your Plate which you would have to be faint (after that the Aqua fortis has been once poured off your Plate) with your prepared Oyl, which Oyl you must use by degrees, as you would have your work fainter: this in Etching Landskips you will find necessary, for that they must lose and stand at a distance, gradatim.

#### CHAP. XV.

Of Limning, and the Materials thereof.

I. L Imning is an Art whereby in water Colours, we strive to resemble Nature in every thing

to the Life.

II. The Instruments and Materials thereof are chiefly these. 1. Gum. 2. Colours. 3. Liquid Gold and Silver. 4. The Grind-stone and Muller. 5. Pencils. 6. Tables to Limn in. 7. Little Glasses, or Horsemuscle; shells.

III. The Gums are chiefly these four, Gum-Arabick, Gum-Lake, Gum-Hedera, Gum-Amoniack.

IV. The principal Colours are these seven, White, Black, Red, Green, Tellow, Blue, Brown: out of which are made mixt or compound Colours.

V. The Liquid Gold and Silver is either natural or

artificial.

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The natural is that which is produced of the Metals themselves: the artificial is that which is formed of other colours.

VI. The Grindstone, Muller, Pencils, Tables, and Shells, or little Glasses, are only the necessary instruments and attendants, which belong to the practice

of Limning.

VII. Chuse such Pencils as are clear and sharp pointed, not dividing into parts: of these you must have many in a readiness, a several Pencil at least, for every several Colour.

#### CHAP. XVI.

Of the Gums, and their Use.

I. The chief of all is Gum-Arabick, that which is white, clear and brittle; the Gum-water

of it is made thus:

Take Gum-Arabick, bruise it and tye it up in a fine clean linnen cloath, and put it into a convenient quantity of pure spring-water, in a glass or earthen vessel; letting the Gum remain there till it is dissolved; which done, if the water is not stiff enough, put more Gum into the cloath, but if too stiff, add more water: of which Gum-water have two sorts by you, the one strong, the other weak; of which you may make a third at pleasure.

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II. But if you be where Gum Arabick is not to be got, you may instead of that use the preparation of

Sheeps leather or parchment following:

Take of the shreds of white Sheep-Skins (which are to be had plentifully at Glovers) or elfe of parchments, one pound; Conduit or running water two quarts, boil is to a thin gelly, then strain it whilst hot through a fine strainer, and so we it

and strained a pint. Honey, Gum-Hedera, of each two Drams, strong wort four spoonfuls, mix them, and strain them with a piece of spunge till they run like a clear Oyl, which keep in a clean vessel till it grows hard.

This Gum will diffolve in water like Gum-Arabick, of which Gum-water is made in like manner; it is a good

ordinary varnish for Pictures.

IV. Gum-Hedera, or Gum of Ivy; it is gotten out of Ivy; by cutting with an Axe a great branch thereof, climbing upon an Oak-tree, and bruifing the ends of it with the head of the Axe; at a Months end, or thereabouts, you may take from it a very clear, and pure fine Gum, like Oyl.

It "is good to put into Gold-size and other Colours, for these three reasons: 1. It abates the ill scent of the size: 2. It will prevent bubbles in Gold-size and other Colours: 3. Lastly, it takes away the fat and clamminess of Colours:

besides which it is of use in making Pomanders.

V. Gum-Amoniacum, It is a Foreign Gum, and ought to be bought strained. Grind it very fine with juice of Garlick and a little Gum-Arabick water, so that it may not be too thick, but that you may write with it what you will.

it dry, and when you gild upon it, out your Gold or Sil-

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ver to the fashion which you drew with the fize or gum, then breath upon the fize, and lay the Gold upon it gently taken up, which press down hard with a piece of wool; and then let it well dry; being dryed, with a fine linnen cloth strike off the loose Gold; so will what was drawn be fairly gilded if it were as fine as a hair: it is called Gold-Arimoniack.

#### CHAP. XVII.

Of the seven Colours in General.

I. THE chief Whites are these, Spodium, Ceruse, White-lead, Spanish-white, Egg-shells burnt, This Colour is called in Greek Asunds of Asusou, video, to see, because Asunothis is the object of fight: in Latin Albus, from whence the Alps had their name, by reason of their continual whiteness with Snow. The Spanish-white is thus made. Take fine Chalk three ounces, Alum one ounce, grind them together with sair water till it be like pap; roul it up into balls, which dry leisurely: then put them into the fire till they are red hot; take them out, and let them cool: it is the best white of all, to garnish with, being ground with weak Gum-water.

II. The chief Blacks are these, Harts-horn burnt, Ivory burnt, Cherry-stones burnt, Lamp-black, Charcoal, Sea-coal, Verditer burnt, Mummy burnt.

Black, in Latin Niger, is so talled from the Greek word veneds, which signifies dead, because putressed and dead things are generally of that colour. Lamp-black is the smooth of a Link, Torch, or Lamp gathered together.

III. The chief Reds are these, Carmine, Vermilion, Red-lead, Indian-lake, native Cinnabar, Red-Oker, Yellow-Oker burnt, Indian Red. It is called in Latin Ruber races, the solve of corticion vel granis mali punici, from the Rinds or Seeds of Pomegranates, as Scaliger saith.

IV. The chief Greens are these, Green Bice, Green Pink, Verdigrise, Verditer, Sapgreen, Pink mixt with Bice. This Colour is called in Latin Viridis from Vires: in Greek 22002 à 2200, Grass or Green

Herb, which is of this Colour.

V. The chief Tellows are these, Orpiment, Masticot deep and light, Saffron, Pink-yellow, dark and light, Oker de Luce, English-Oker, Roman-Oker, Gallstone. This Colour is called in Latin Flavus, Luteus, in Greek ξανθδς, which is Homer's Epithete for Menolaus, where he calls him ξανθδς ΜεγελάΘ:

VI. The chief Blems are Ultramarine, Indico, Smalt, Blue Bice. This Colour is called in Latin Caruleus, in Greek Kudre@ à Kuar@, the name of a

Stone which yields Ultramarine.

VII. The chief Browns are Umber, Spanish-brown, Colens Earth, Gallstone, rust of Iron, Mummy. It is called in Latin Fuscou, quasi pos oxiditas, from darkning

the Light, in Greek our's.

VIII. This is to be noted, that of the aforenamed colours, Vermillion, Verdigriese, Orpiment and some others are too course and gritty to be used in water Colours, unless they be purified and prepared. And Turnsole, Litmose blue, Roset, Brasil, Logwood, and Saffron, are more ht for washing Prints, than curious limning.

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## CHAP. XVIII.

Of Colours in Particular.

L CEruse, Grind it with glair of Eggs, and it will make a very good white. It is too yellow for some purposes, course and gritty.

II. White-lead, Grind it with a weak water of Gumlake, and let it stand three or sour days, after which if you mix with it Roset and Vermilion, it makes a fair

Carnation.

To make that your White-lead shall neither rust nor shine (both which are great faults in the Art of Limning) before you grind it lay it in the Sun two or three days, to exhale that greafy and salt matter that poysons and starves the colours scraping away also the outside that is foul or dirty, which then grind with fair Water, or Lavender, or Rosemary water upon a Porphyre. When it is ground have in a readiness a chalk stone, with farrows in it, into which farrows put the colour whilf it is met, and so let it dry in the Sun, and it will be very clean and white: being through dry, let it be washt in this manner. Take of the former cleansed Lead a pound, put it into a bason of spring water, stir it a while together till the water is all very white, then let it stand, and a kind of greafie scum will arise, which blow off, and pour the white water, (being stirred a fresh, and a little setled again) into a clean Bason, leaving the groffer body at the bottom behind (not fit for our purpose:) let this water stand an homr or two, till it is quite setled, then decant the clear water, and put to the sediment fresh water, stir it as before mentioned, then let it settle half the time it did at first, and pour off the white mater into another clean bason, leaving again the courser part behind; let this water settle, and decant

cant away the clear water from it: the remaining Lead by, and then put it up into papers for your use. Thus refined five or fix times, it will be most pure, and best for use. When you have occasion for it, spread a little of it about a shell with your finger, and temper it with Gum-water. In the same manner must Ceruse be washed. Observe also in grinding of White, that you grind it not too much, less it prove greasy or Oyly, or of a dirty colour.

III. Spanish-white, It is the best white of all, to gar-

nish with, ground with Gum-water.

IV. Lamp-black, ground with Gum-water, it makes

a good black.

V. Vermilion; Grind it with the glair of an Egg, and in the grinding put a little clarified honey, to make its colour bright and perfect. Native Cinnabar is better and

a brisker colour.

VI. Cinnabar-lake, it makes a deep and beautiful red, or rather purple, almost like unto a Red-rose. Grind it with Gum-lake and Turnsole-water: if you will have it light, add a little Ceruse, and it will make it a bright Crimson; if to Diaper, add only Turnsole water.

VII. Red-lead, Grind it with fome Saffron, and stiff Gum-lake; for the Saffron makes it orient, and

of a Marigold colour.

VIII. Turnfole, Lay it in a Sawcer of Vinegar, and fet it over a Chafing-dish of coals; let it boil, then take it off, and wring it into a shell, adding a little Gum-Arabick, let it stand till it is dissolved: It is good to shadow Carnation, and all Yellows.

IX. Rofet, Grind it with Brazil-water, and it will make a deep purple: put Ceruse to it, and it will be lighter; grind it with Litmose, and it will make a fair

Violet.

X. Spanish

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X. Spanish-brown, Grind it with Brazil-water: mingle it with Ceruse, and it makes ahorse-slesh Colour. It is not so brisk and lively as Indian Red.

XI. Bole-Armoniack, It is a faint colour; its chief

use is, in making fize for burnish'd gold.

XII. Green-bice. Order it as you do Blue bice; when it is moift, and not through dry, you may

Diaper upon it with the water of deep green.

XIII. Verdigrife, Grind it with juyce of Rue, and a little weak Gumwater, and you will have a most pure green: if you will Diaper withit, grind it with Lye of Rue (or else the decoction thereof) and there will be a hoary green: Diaper upon Verdigrise green with Sap-green: also Verdigrise ground with white Tartar, and then tempered with gum-water, gives a most perfect green.

It is extreamly course unless it be purified as I have taught in my Doron, lib. 3. cap. 6. Sect. 13. §. 2. Being so prepared one ounce will be worth Ten of the Course, or that which is bought in the shops. It is done with spirit of Vinegar.

XIV. Verdirer, grind it with a weak Gum-Arabick water: it is the faintest green that is, but is good to

lay upon black, in any kind of Drapery.

XV. Sap-green; lay it in sharp Vinegar all night; put into it a little Alom to raise its colour, and you will have a good green to Diaper upon other greens. It is a shining but a fading colour, use green Pink instead

of it; for it has neither of those faults.

XVI. Orpiment, Arsenicum of Auripigmentum, grind it with a stiff water of Gum-lake, because it is the best colour of it self, it will lie upon no green, for all greens, White and Red-lead, and Ceruse stain it: wherefore you must deepen your colours so that the Orpiment may be highest, and so it may agree with all Colours. It is of a Venomous property, and some of it is course.

H 3 XVII. Ma-

XVII. Masticot, Grind it with a finall quantity of Saffron in gum-water, and never make it lighter than it is: it will endure to lie upon all colours and metals.

XVIII. Saffron, Steep it in glair: it may be ground

with Vermilion.

XIX. Pink yellow, If you would have it fad coloured, grind it with Saffron; if light, with Cerufe: mix it with weak gum-water, and fo use it.

XX. Oker de Luce, grind it with pure Brazil water: it makes a passing hautcolour; and is a natural shadow for gold. Roman Oker is the more glowing of all the Okers.

XXI. Umber, It is a more fad brown colour. Grind it with gum-water, or gum-lake; and lighten it (if you please) with a little Ceruse and a blade of Saffron: to cleanse it, burn it in a Crucible, then grind it, and it will be good, and when you temper it in your shell, use a drop or two of Onion water, and it will preserve it from crackling.

XXII. Utramarine, If you would have it deep, grind it with Litmole-water; but if light, with fine Cerufe and a weak Gunt-Arabick water. In grinding Utramarine and other colours, let not your motion be too fwift, but grind it gentle and flow, because the swiftness of the motion, causeth the stones to hear, which will cause your colour to starve or loose somewhat of its Lustre, especially if it be a colour of no great body, as Pink, Indico, etc.

XXIII. Indico, Grind it with water of Gum-Ara-

bick, as Ultramarine.

XXIV. Blue-bice, Grind it with clean water, as small as you can, then put it into a shell, and wash it thus: put as much water to it as will fill up the yessel or shell, and shi it well, let it stand an hour, and the filth and dirty water call away; then put in more clean water,

do thus four or five times; and at last put in Gum-Arabick water somewhat weak, that the Bice may fall to the bottom; pour off the gum-water, and put more to it, wash it again, dry it, and mix it with weak gum-water (if you would have it rise of the same colour) but with a stiff water of Gum-lake, if you would have a most perfect blue; if a light blue, grind it with a little Ceruse; but if a most deep blue, add water of Litmose.

XXV. Smalt, Grind it with a little fine Roset, and it will make a deep Violet: and by putting in a quan-

tity of Ceruse, it will make a light Violet.

XXVI. Litmose-blue, Grind it with Ceruse: with too much Litmose it makes a deep blue; with too much Ceruse, a light blew: grind it with the weak

water of Gum Arabick.

Take fine Litmose, cut it in pieces, lay it in weak mater of Gum-lake for twenty four hours, and you shall have a mater of a most perfect Azure; with which water you may Diaper and Damask upon all other blues, to make them shew more fair and beautiful.

XXVII. Orchal, Grind it with unflak'd Lime and Urine, it makes a pure Violet: by putting to more or less Lime, you may make the Violet light or deep

as you please,

XXVIII. Mummy burnt, makes a good black: but otherwise it is ill conditioned, hard, and will not flow from the pencil, you may burn it in a Crucible well luted.

XXIX. English Oker, It is a yellow colour, and lies even in the shell, of it self: it is of great use being well

ground.

XXX. Pink mixed with Bice, It is a good Green, the fairest Pink is best, well ground and tempered with blue Bice, allowing one quantity of Pink, to three

of blue Bice. To deepen this colour in Landskip or Drapery, mix with it a little Indico finely ground.

XXXI. Indian Lake. It makes a delicate Purple, grind it with a little Gum-water, and when it is ground fine, before you put it into the shell, mix a little pouder of white Sugar-candy with it, which will preferve it from cracking; then may you spread it thinly with your finger about the shell.

XXXII. Indian Red. It makes a dark Red, because this colour is very course, you may use Umber, and a

little Lake tempered, which is as good.

XXXIII. Ivory black. Grind it with a little white Sugar-candy, it will preserve it from crackling out of

your shell: it makes a black.

XXXIV. Cherry stone. It is burnt in a Crucible (as is the former) and so ground. It is good for Drapery, and for a black Sattin. Temper it with a little white, Indian-Lake, and Indico. Heighten it with a lighter mixture, deepen it with Ivory black; this was Hilliards way.

XXXV. Caput mortuum of Pitriol, First grind it well upon a Porphyry; then carefully wash it as we have taught you to wash White-lead in Chap. 18. Sett. 2. a-foregoing; after grind it with a weak Gum-lake-water: it makes a deep red, or almost a purple colour.

## CHAP. XIX.

Of mixt and compound Colours.

I. Morry, It is a wonderful beautiful colour, composed of purple and white: it is made thus. Take Cinnabar-lake two ounces; White-lead one ounce, grind them together. See the 24. Section.

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II. A glass gray, mingle Ceruse with a little Azure.

III. A bay colour, mingle Vermilion with a little
Spanish brown and black.

IV. A deep purple, It is made of Indico, Spanish-

brown and white.

It is called in Latin Purpureus, in Greek Topoupe from Topovez, a kind of shell-fish that yields a liquor of that colour.

V. An Ash-colour, or Gray, It is made by mixing White and Lamp-black; or white with Sinaper; In-

dico and black make an Ash-colour.

It is called in Latin Cæsius, and color Cinereus; in

Greek Thauxes and Tsopoisns.

VI. Light Green, It is made of Pink and Smalt; with white to make it lighter if need require.

VII. Saffron colour, It is made of Saffron alone by

infusion.

VIII Flame colour It is made of Vermilion and Orpiment, mixed deep or light at pleasure: or thus, Take Red-lead and mix it with Masticot, which heighten with white.

IX. A Violet colour, Indico, White and Cinnaber-lake make a good Violet. So also Ceruse and Litmose, of

each equal parts.

X. Lead colour, It is made of White mixed with

Indico.

XI. Scarlet colour, It is made of Red-lead, Lake, Vermilion: yet Vermilion in this case is not very useful.

XII. To make Vermilion.

Take Brimstone in powder four ounces, mix it with Quicksilver a pound, put it into a Crucible well luted, and upon a Charcoal-fire heat it till it is red hot; then take it off and let it cool. You have a better way to do this in my Pharmacopaia Londinensis lib, 3.cap.7. Sett. 54. to which I referr you.

XIII. To make a bright Crimfon,

Mix tincture of Brazil with a little Ceruse ground with fair water.

XIV. To make a fad Crimfon.

306

Mix the aforelaid light Crimson with a little Indico ground with fair water.

XV. To make a pure Lake.

Take Urine twenty pound, boil it in a Kettle and fourn it with an Iron fournmer till it comes to fixteen pound; to which add Gum-Lake one pound, Alom five ounces; boil all till it is well coloured, which you may try by dipping therein a piece of linnen cloth; then add fweet Alom in powder a fufficient quantity, strain it and let it stand; strain it again through a dry cloth till the liquor be clear: that which remains in the cloth or bag is the pure Lake.

XVI. To make a Crimson-Lake.

Its usually made of the flocks florn off from Crimfon cloth by a Lye made of Sale-peter, which extracts the colour; which precipitate, edulcorate, and dry in the Sun or a Stove.

XVII. A pure green.

Take white Tarrar and Virdigrise, temper them with strong White-wine Vinegar, in which a little Gum-Arabick hath been dissolved.

XVIII. A pure Violet.

Take a little Indico and tincture of Brazil, grind them with a little Ceruse.

XIX. A pure Purple colour.

Take fine brimftone an ounce and an half, Quickfilver, Sal-Armoniack, Jupiter, of each one ounce; beat the Brimftone and Salt into powder, and make an Amalgama with the Quickfilver and Tin, mix all together, which put into a great glass goard; make under it an ordinary fire, and keep it in a constant heat for the space of fix hours. d

XX. To make a Yellow colour.

Take the Yellow chives in white Lillies fleep them in gum-water, and it will make a perfect Yellow; the fame from Saffron and Tartar tempered with gumwater.

XXI. To make a Red colour.

Take the roots of the leffer Bugloss, and beat them. and strain out the juyce, and mixt it with Alom-water.

XXII. To make excellent good Greens,

The Liver of a Lamprey makes an excellent and durable grass green: and yellow laid upon blue will change into green: so likewise the juyce of a blue Flower de Luce, mixed with gum-water, will be a perfect and durable green or blue, according as it is used.

XXIII. To make a Purple colour.

Take the juyce of Bilberries, and mix it with Alom and Galls, and so paint with it.

XXIV: To make a good Murry.

Temper Rofer with a little Rofe-water, in which a little gum hath been dissolved, and it will be good, but not exceeding that at the first Section of this Chapter. XXV. To make Azure or Blew.

Mix the Azure with glew-water, and not with gumwater.

XXVI. To make a Tellow Green, or Purple.

Buck-thorn betries gathered green and steeped in Alom-water yield a good yellow: but being through ripe and black (by the eighteenth Section of the rwenty seventh Chapter of the third Book) they yield a good green: and lastly, being gathered when they are ready to drop off, which is about the middle or end of November, their juice mixt with Alom water yields a good Purple colour. CHAP.

#### CHAP. XX.

## Of Colours for Drapery.

I. Tor Yellow Garments. Take Masticot deepened with Brown-Oker and Red-Lead.

II. For Scarlet. Take Vermilion deepened with Cinnaber-lake, and heightened with touches of Massicot.

III. For Crimfon. Lay on Lake very thin, and deepen with the same.

IV. For Purple. Grind Lake and Smalt together: or take Blue-bice, and mix it with Red and White-Lead.

V. For an Orient Violet. Grind Litmose. Blew-Smalt, and Ceruse; but in mixture let the Blew have the upper hand.

VI. For Blew. Take Azure deepned with Indy-

Blew or Lake heightened with white.

VII. For black Velvet. Lay the garment first over with Ivory black, then heighten it with Cherrystone black, and a little white.

VIII. For black Sattin. Take Cherrystone black; then white deepened with Cherrystone black; and

then laftly, Ivory black.

IX. For a pure Green. Take Verdigrise, bruise it, and steep it in Muscadine for twelve hours, then strain it into a shell, to which add a little Sap-green: (but put no gum thereto.)

X. For a Carnation. Grind Ceruse, well washed.

with Red-lead; or Ceruse and Vermilion.

XI. For Cloth of Gold, Take brown Oker, and liquid Gold water, and heighten upon the same with fmall stroaks of Gold.

XII For

XII. For white Sattin. Take first fine Ceruse, which deepen with Cherrystone-black, then heighten again with Ceruse, and fine touches where the light falleth.

XIII. For a Ruffet Sattin. Take Indy-blew and Lake,

first thin, and then deepned with Indy again.

XIV. For a hair Colour. It is made out of Masticot, Umber, Yellow Oker, Ceruse, Oker de luce, and Sea-coal.

XV. For a Popenjay Green. Take a perfect Green

mingled with Masticot.

XVI. For Changeable Silk. Take water of Masticot and Red-lead; which deepen with Sap-green.

XVII. For a light Blew. Take Blew-bice, heightened

with Ceruse or Spodium.

XVIII. For to shadow Russet. Take Cherrystoneblack and white; lay a light Russet, then shadow it with white.

XIX. For a Skie Colour. Take Blew-bice and Venice Ceruse: but if you would have it dark, take

fome blew and white.

XX. For a Straw Colour. Take Masticot, then white heightened with Masticot, and deepned with Pink. Or thus, Take Red-lead deepned with Lake.

XXI. For Tellowish. Thin Pink deepned with Pink and Green: Orpiment burned makes a Marigold co-

lour.

XXII. For a Peach Colour. Take Brazil water, Log-

water and Ceruse.

XXIII. For a light Purple. Mingle Ceruse with Logwood water: or take Turnsole mingled with a little Lake, Smalt and Bice.

XXIV. For a Walnut Colour. Red-lead thinly laid,

and shadowed with Spanish brown.

XXV. For a Fire Colour. Take Masticot, and deepen it with Masticot for the slame.

XXVI. For a Tree. Take Umber and white,

wrought with Umber, deepned with black.

XXVII. For the Leaves. Take Sap-green and green Bice, heighten it with Verditure and white.

XXVIII. For Water. Blew and White, deepned

with blew, and heightned with white.

XXIX. For Banks. Thin Umber, deepned with

Umber and black.

XXX. For Feathers. Take Lake frizled with Redlead. See Chap. 26. following.

#### CHAP. XXI.

Of Liquid Gold and Silver.

I. T Iquid Gold and Silver.

Take five or fix leaves of Gold or Silver, which grind (with a stiff Gum-lake water, and a good quantity of Salt) as small as you can, then put it into a vial or glazed vessels, add so much fair water as may dissolve the stiff gum-water; then let it stand four hours, that the Gold may settle: decant the water, and put in more, till the Gold is clean washed: to the Gold put more fair water, a little Sal-Armoniack and common Salt, digesting it close for four days: then put all into a piece of thin Glovers leather (whose grain is peeled off) and hang it up, so will the Sal-Armoniack fret away, and the Gold remain behind, which keep.

Or thus, Grind fine leaf Gold with strong or thick gum water very fine; and as you grind add more thick gum-water being very fine, wash it in a great shell, as you do Bice: then temper it with a little quantity of Mercury sublimate, and a little dissolved gum to bind it in the shell; shake it, and spread the Gold about the sides thereof, that it may be all of one colour and sineness, which use with fair mater, as you do other colours. The same observe in liquid Silver; with this observation, That if your Silver, by length of time, or humidity of the air become rusty; then cover the place with juyce of Garlick before you lay on the Silver, which will preserve it.

When you use it, temper it with glair of Eggs, and so use it with pen or pencil. Glair of Eggs is thus made. Take the whites and beat them with a spoon, till that rise all in a soam; then let them stand all night, and by morning they will be turned into clear water, which is

good glair.

II. Argentum Musicum.

Take one ounce of Tin, melt it, and put thereto of Tartar and Quickfilver of each one ounce, stir them well together until they be cold, then beat it in a mortar and grind it on a stone; mix it with gum water, write therewith, and afterwards polish it.

III. Burnished Gold or Silver.

Take Gum-lake and diffolve it into a stiff water; then grind a blade or two of Saffron therewith, and you shall have a fair Gold: when you have set it, being throughly dry, burnish it with a dogs tooth. Or thus, having writ with your pen or pencil what you please, cut the leaf Gold or Silver into pieces, according to the draught, which take up with a feather, and lay it upon the drawing, which press down with a piece of wool; and being dry, burnish it.

IV. Gold Armoniack.

This is nothing but that which we have taught at the fourth Section of the fixteenth Chapter of this Book.

V. Size

V. Size for burnished Gold.

Take Bole-Armoniack three drams, fine Chalk one dram; grind them as finall as you can together with fair water, three or four times, letting it dry after every time: then take glair, and strain it as short as water, with which grind the Bole and Chalk, adding a little Gum-Hedera, and a few blades of Saffron: grind all as small as possible, and put them into an Ox horn (I judge a glass vessel better) and set it to rot in horse dung for six weeks; then take it up, and let it have air, and keep it for use.

Its use is for gilding parchments, book-covers, and leather, thus lay this size first upon the parchment, then with a feather lay the Gold or Silver upon it, which when dry

burnifb it.

VI. To Diaper on Gold or Silver.

You must Diaper on Gold with Lake and Yellow Oker: but upon Silver with Ceruse.

VII. Aurum Musicum.

Take fine Crystal, Orpiment, of each one ounce, beat each severally into a fine powder, then grind them together well with glair.

You may write with it, with pen or pencil, and your let-

ter or draught will be of a good Gold colour.

VIII. Another way to do the same.

Take of the best English Tin, of the best Spanish Quicksilver, of each an ounce: make an Amalgama, by putting the Crude Mercury to the melted Tin, and stirring it together: then powder them well, and mix them with flowers of Sal-Armoniack, flowers of Sulphur, of each an ounce: Calcine gently till the Sulphur is consumed, so will the Aurum stick to the upper Crust or Scoria.

This powdred fine, and ground with glair, will with Pen or Pencil, give your Figure or Picture a Golden colour.

CHAP.

# CHAP. XXII.

# Of Preparing the Colours.

L Colours, according to their natures have each a particular way of preparation: to wir, by

grinding, washing or steeping.

II. The chief Cotours to be ground are these; Whitelead, Ceruse, Cinnaber-lake, Oker yellow and brown, Pink, Indico, Umber, Colens Earth, Spanish-brown, Ivory-black, Cherrystone-black, Lamp-black, Indian-Red, Indian-Lake.

MI. The chief Colours to be wash'd are Red-lead, Masticot, Green Bice, Cedar Green, Ultramarine,

Blue Bice, Smalt, Verditure.

IV. The chief Colours to be steep'd, are Sap-green, Saffron, Turnsole, Stone-Blue, Venice Berries.

V. To grind Colours.

Take the Colour you would grind, and scrape off from it all the filth, then lay it upon the stone, and with the muller bruise it a little; then put thereto a little spring water, and grind all together very well, till the colour is very fine; which done, pour it out into certain hollows or furrows cut in Chalkstone, and there let it lie till it is dry, which reserve in papers or glasses.

In grinding your Colours, put not too much water to them, upon the stone, for they ought to be ground somewhat thick, like pulp or pap: and they ought not to be left too moift, but thick and clammy. If after your Colour is dry in the shell, you can rub it off with your singers, it must be better bound with Gum; and if there is too much Gum, is

will shine, and be apt to crackle off; after it is need.

VI. To wash Colours.

Put the colour into a glazed veffel, and put thereto fair water plentifully, wash it well, and decant (after a while) the water; do this fix or seven times; at last put the water (being just troubled) into another glazed vessel, leaving the dregs at bottom: then into this second vessel put more fair water, washing it as before, till the water (being setled) be clear, and the colour remain fine at bottom: we have taught another way at the twenty fourth Section of the eighteenth Chapter of this Book.

Refore you take the colour out of the Vellel, spread it very thin, about the sides thereof, and when it is dry, some of it will fall to the bottom, which keep by it self: but the remainder which sticks to the side of the Bason, is the best of all, which with a feather strike off from the sides of the

Vessel, for it will be finer than any flower.

VII. To fleep Colours.

Take a quantity thereof, and put it into a shell, and fill the shell with fair water, to which add some tine powder of Alom, to raise the colour; let it thus steep a day and night, and you will have a good colour.

Where note, Saffron steeped in Vinegar gives a good colour; and the Venice Berries in fair water and a little Alom, or a drop or two of oyl of Vitriol makes a fair sellow. But some colours are to be boyled, as Brail, Logwood, Turnfole, Rinds of Walnuts, Woodsoot, &c. these when boyled are to be kept close stops in Glasses, till you have occasion to use them.

Vill. To temper the Colours.

Take a little of any colour, and put it into a clean shell, and add thereto a few drops of gum-water, and with your fingers work it about the shell, then let it dry; when dry, touch it with your fingers, if any colour colour comes off, you must add stronger gum-water: but being dry, if the colour glister or shine, it is a sign there is too much gum in it, which you may remedy by putting in fair water.

IX. To help the defects.

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Some colours, as Lake, Climber, and others which are hard, will crack when they are dry; in this cafe, in tempering them add a little white Sugar-candy in very fine powder, which mix with the colour and fair water in the shell, till the Sugar-candy is dissolved.

X. These colours, Umber, Spanish brown, Colen Earth, Cherrystone, and Ivory-black, are to be burnt

before they be ground or wash'd. XI. To burn or calcine Colours.

This is done in a crucible, covering the mouth thereof with clay, and fetting it in a hot fire, till you are fure it is red-hot through: which done, being cold, wash or grind it as aforesaid.

XII. To prepare shadows for Colours.

White is shaded with Black, and contrariwise: Yellow with Umber and the Okers: Vermilion with Lake: Blue-bice with Indie: Black-coal with Roset, &c.

XIII. The several temperatures for colouring and sha-

dowing of Histories.

They are twenty in number, viz. Sea-cole mixt with Lake. 2. Umber with Masticot. 3. Yellow Oker burnt with white. 4. Umber with Ultra marine. 5. Yellow with Umber. 6. Umber with Lake. 7. Verditer burnt with Red-lead and White. 8. Ultramarine with Lake. 9. Ultramarine with Red-lead. 10. Ultramarine with white. 11. Indico with white. 12. Indico and Lake with white. 13. Indico, Pink with white. 14. Indico with Oker

and white. 15. Indico with Malficot and white. 16. Cherrystone burnt with White and Red-lead 17. Burnt Ivory with Lake. 18. Indico and Pink with the best Rust of Iron. 19. Lake and Rust of Iron with light Pink. 20: Rust of Iron and Lake. for the deeper shadows.

XIV. The several temperatures or mixtures for sha-

dowing Heads after the Life.

The principal mixtures are twelve in number, viz. r. Lake with Indian Red. 2. Red-lead with Roman Oker. 3. Indian Red with Ultramarine. 4. Indian Red with Pink and Gall-stone. 5. Yellow Oker with Indico. 6. Red-lead with Pink and Indico. 7. Red-lead with Roman Oker and Indico. 8. Red-lead with Pink, Yellow Oker and Lake. 9. Indico, Lake and Roman Oker with white. 10. Indico, Pink, and Roman Oker with Indian Red. 11. Red-lead with Umber, Masticote, and Pink 12. Pink with Roman Oker.

XV. The several mixtures for shadowing hair.

1. White and Roman Oker for light hair. 2. White and Yellow Oker for lighter hair. 3. White with Rust and Roman Oker. 4. Light Pink with Sea-Cole and Yellow Oker. 5. Dark Pink with Rust and Roman Oker. 6. Pink with the best Rust and Gall-stone. 7. Florence Pink with Lake and burnt Ivory, a good shadow for hair and face. 8. White with Umber and Yellow Oker, for light hair. 9. The last mixture with more Umber and Cherrystoneblack for a deeper hair. 10. Yellow Oker with Umber and Cherrystone-Black for dark hair. 11. The last mixture with Umber and Cherrystone-black for a darker bair.

XVI. To do these things artificially, you may temper the natural Colours with your pencil upon Vour your pallat, being first placed in order, then wer your pencil in water, and temper upon the colour you intend to make use of first in your mixture; then rub your Pencil in a clean place of your Pallat, leaving part of the colour upon the place: and in the same manner take from as many of the other as shall be directed for such and such temperatures or mixtures. Or thus, Dip your finger in water, and temper or mix your colours as you did with your Pencil, placing your colours so mixed upon your pallatin order.

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new made and, pale the parchusen to be paleboard, with stromurabat laural of if O ... a canol-

I. The manual Instruments are four (by the second Section of the lifteenth Chapter of this Book) to wir, The Grinding-Bone and Muller, Pencils, Tables to Lings on, and shells or little glasses to hold your colours.

your colours.

II. The Grinding-from may be of Porphyry, Serpentine or Marble, but rather a Pebble, for that is the belt of all others: Multer only of Pebble, which keep

very clean.

These reas be easily get of Marblers or Stone-cutters in

London.

city and articles

III. Choose your pencils thus: by their fastness in the quills, and their sharp points after you have drawn or wetted them in your mouth two or three times; so that although larger, yet their points will come to as small as a hair, which then are good; but if they spread or have any extravagant hairs they are naught.

IV. To wash your pencits.

After using them, rub the ends of them well with Soap, then lay them a while in warm water to steep, then take them out and wash them well in other fair water.

V. To prepare the Table.

It must be made of pure fine baste-board, such as Cards are made of (of what thickness you please) very finely flick'd and glazed with a Dogs tooth. Take a piece of this patte board of the bignels you intend the Picture, and a piece of the finest and whitest parchment you can get(virgin parchment) which cut of equal bigness with the paste-board; with thin, white, new made starch, paste the parchment to the pasteboard, with the outside of the skin out-wardmost: lay on the starch very thin and even, being thus pasted let it dry throughly, then the grinding stone being clean, lay the Card thereon with the parchment fide downwards, and as hard as you can, rub the other fide of the paste-board with a Boars-tooth set in a stick; then let it be thorow dry, and it will be fit to work or Limn any curious thing upon.

VI. The shells holding or containing your colours, ought to be Horse-muscle shells, which may be got in July about Rivers sides; but the next to these are small Muscle-shells, or instead thereof little glass ver-

fels in the same form if possible.

VII. Your Table or Card being thus prepared, you are to lay a ground of flesh colour, before you begin your work, and that must be tempered according to the complexion of the face to be drawn: if the complexion be fair, Temper white Red lead and lake together. If an hard, swarthy complexion, Temper with your White and Red a little sine Masticet, or English Oker. But note that your ground ought always to be fairer than the face

face you draw: for it is an easily matter to darken a light colour, but a difficult to lighten a deep one. Your ground thus prepared, lay it upon your Card, with a Pencil full of colour, and rather thin and waterish, than thick and gross, and with two or three daubs of your great Pencil, lay it on in an instant, the nimbler it is laid on, the eveneratic colour will lye. Cover also tather too much of your Card, than too little, with this prime colour; somewhat more of the Card with the ground colour, than you shall use for the face.

VHI. This done, take a pretty large Pallat of Ivory or Cocuswood, and before you begin to work, temper certain little heaps of feveral shadows for the face, which you must mix with your finger, about the Pallat.

### CHAP. XXIV.

## Of Proparations for Limbing.

I Ave two shells or small glasses, in either of which must be pure clean water, the one to wash the pencils in being foul; the other to temper the colours with, when there is occasion.

II. Besides the pencils you Linn with; a large, clean and dry pencil, to cleante the work from any kind of dust, that may fall upon it, which are called Bitch-pencils.

III. A sharp Pen-knife to take off hairs that may come from your pencil, either among the colonis or upon the work; or to take out spots that may fall upon the Card or Table.

IV. A paper with a hole cut therein, to lay over the Card, to keep it from dust and filth, to rest your hand upon, and to keep the foil and sweat of your hand from fullying the parchment, as also to try your pencils on before you nie them.

Let the shells or small glasses, water, pancils and pen-

knife lie all on the right hand,

V. Have ready a quantity of light Carnation or flesh colour temper dup in a shell by it self with a weak gum-water; if it be a fair complexion, mix White and Red-lead together; if a brown or swarthy, add to the former, Masticot, or English Oker, or both; but be sure the slesh colour be always lighter than the complexion you would Linn; for by working on it you may bring it to its true golour.

VI. In a large Horse muscle shell place your several shadows (for the flesh colour) in little places one

diffinct from another.

VII. In all fladowings have ready fome white, and lay a good quantity of it by it felf befides what the shadows are sirst mixed with: for Red for the cheeks and lips, temper Lake and Red-lead together: for blew shadows (as under the eyes and in veins) Indico or Ultramarine and white; for gray faint shadows, white, English Oker, sometimes Massicot: for deep shadows, white, English Oker, Limber: for dark shadows, Lake and Pink, which make a good sleshy shadow.

VIII. To make choice of the light,

Let it be fair and large and free from floadons of Trees or Honfes, but all clear Skie light, and let it be direct from above, and not transverse; let it be Northerly and not Southerly, and let the room be close and clean, and free from the Sun beams.

IX. Of the manner of fitting.

Let your desk on which you work he fo fituate, that fitting before it, your left arm may be towards the light, that the light may strike sidling upon your work. Let the

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party that is to be Limned, be in mobal posture themselves will design, but not above two yards off you at most, and level with you, wherein observe their notion, if never to small, for the least motion, if not recalled, may in struct time bring on you many errors: Lastly, the face being similarly let the party stand (not sit) at a farther distance (four or sive yards off) to draw the posture of his clothes.

X. If you design to Limn.upon Sartin; you must take Ising glass, and steep it sour and twenty hours in water, then boyl it in spirit of Wine, until it be very clammy, which you will perceive by diping your singer into it; then after your out lines are drawn upon the Sattin, take an indifferent large pencil, and wastit thin over, as far as your out-lines are, which will prevent your colours from linking or flowing.

XI. To prevent your colours from inking into your Card, Paper, or Parchment, you design to Linn be.

Take Roch-Alom, host it in spring water, shen take white of a spunge, and met the hack side of som paper, ibut you intend to draw on very thin, whilf the Water is hor, he as quick in westing of it as you can; this will prevent the colors some single.

XII. Lastly, these general things are it be observed.

That if your colours peel of by realish of the greatiness of your Parchinent, will not be on, you thust mix with thema very little ear. Wax, and it will help them, 2. That you lit not above two yards from that you draw by. 3. That the parlon you draw, fit in a higher feat, than you that draw, 4. That you draw not any part in the face of a Picture, exactly at furst, neither finish an Eye, Note, or Mouth, fill the rest of your work come up, and be wrought together with it. 5. That when you have finished the bases let, the party stand up, to draw, the Drapery, by, 6. That blew Bice is never need in a Pace, 7, That black

black must not by any means be used: for other shadows, your own observation must direct you, it being impossible to give a general Rule for the shadows in all Faces. Estate of two treathed 2908 Helain

#### CHAP XXV

Of the Practice of Limning in Miniture, or Drawing of a Face in Colours.

1 0 begin the work.

-qual Have all things in a readiness ( as before) then on the Card lay the prepared colour (answerable to the complexion prefented) even and thin, free from hairs and spors, over the place where the Picture is to be: the ground thus laid, begin the work, the party being let, which must be done at three fittings : at the first fitting the face is only dead coloured, which takes up about two hours time: at the fecond fitting, go over the work more curiously, adding its particular graces or deformities, fweetly couching the colours, which will take up about five hours time: at the third fixing, finish the face, in which you must perfect all that is imperfect and rough, putting the deep thadows in the face, as in the eyes, eye-brows, and ears, which are the last of the work, and not to be done till the hair curtain, or backfide of the Picture, and the drapery be wholly finished.

M. The operation or work at first hising.

The ground for the complexion being laid, draw the out-lines of the face, which do with Lake and white mingled; draw faintly, that if you mils in proportion or colour you may after it; this done, add to the former colour Red-lead, for the cheeks and lips let it be but faint (for you cannot lighten a deep colour ) Chap. 25. The Practice of Limning, &c. 123

lour) and make the shadows in their due places, as in the cheek, lips, tip of the chin and ears, the eyes and roots of the hair: shadow not with a flat vencil. but by fmall touches (as in hatching) and to go over the face. In this dead covering rather than to be curious, frive as near as may be to imitate nature. The red fladows being put in their due places; fladow with a faint blew, about the corners and balls of the eyes; and with a grayish blew under the eyes and about the temples, heightening the fladows as the light falls, also the harder shadows in the dark side of the face, under the eye brows, chin and neck. Bring all the work to an equality, but add perfection to no particular part at this time; but imitate the life in likeness, roundness, boldness, posture, colour, and the like. Laftly, touch at the hair with a futable colour in fuch curls, folds and form, as may either agree with the life, or grace the Picture: fill the empty places with colour, and deepen it more firongly, than in the dee pell fliadowed before.

III. The operation or work at second fisting.

As before rudely, so now you must tweeten those varieties which Nature affords, with the same colours and in the same places driving them one into another, yet so as that no lump or spot of colour, or rough edge may appear in the whole work; and this must be done with a pencil sharper than that which was sted before. This done, go to the backside of the Picture which may be Landskip, or a currain of blew of red Sattin: if of blew, temper as much like as will cover a Card, and let it be well mixed with gum; with a pencil draw the our-lines of the curtain; as also of the whole Picture; then with a large pencil lay thinly or airily over the whole ground, on which you mean to lay the blew; and then with a large pencil lay over

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the same a substantial body of colours in doing of which be nimble, keeping the colour moift, letting no part thereof be dry till the whole be covered. If the curtain be Crimfon, trace it out with Indian-Lake; lay the ground with a thin colour; and lay the light with a thin and waterish colour, where they fall; and while the ground is yet wet, with a strong dark colour tempered fomething thick, lay the strong and hard shadows close by the other lights. Then lay the linnen with faint white, and the drapery flat of the colour you intend it. In the face, fee what shadows are too light or too deep, for the curtain behind, and drapery, and reduce each to their due perfection; draw the lines of the eye-lids, and shadow the entrance into the ear, deepness of the eye-brows, and eminent marks in the face, with a very harppencil; laftly, go over the hair, colouring it as it appears in the life, calting over the ground some loose locks or hairs, which will make the Picture stand as it were at a distance from the curtain; Shadow the linnen with white, black, and a little rellow and blew; and deepen your black, with Lyory black mar-As before rudely of the and Indico. 101 viebur orolled as

My The operation or work at third fitting it was a porter This third work is wholly fpent in giving frong touches where you fee cause, in rounding, smooth, ing and colouring the face, which you may better fee to do, now the curtain and drapery is limned than before. And now observe whatsoever may conduce to the perfection of your work, as geffure, fours or moles, casts of the eyes, windings of the mouth, and the like; and be fure never to make your deepest shadows so deep as they appear in the life.

V. The ground colour for hair, and how to heighten and airily over the whole ground, on which are

blows and then with a largetimes

deepenit.

ans You must lay on the hair in miniture, of a Colour not fo light as the lightest, nor so deep as the deepest fladow, but in a middle proportion between both, on which you may either heighten or deepen at pleafire. If you lay it on with the lightest colour, it will require a long time to work it down; and if fo dark as the deepest, you cannot deepen it lower with the same colour. Moreover you must lay this Ground colour, extreamly even and smooth, and the speedier you are in doing it, the better. In doing of it, use a Goofe-quil-pencil, and let the temper thereof not be too thin, because the Parchment will appear then through the ground, which it ought to cover; and rather than it should so appear, when the first laid-Ground is dry, go over the same again, with the same colours.

#### CHAP. XXVI.

Of Limning Drapery.

A Full and fubstantial ground being laid all over A where you intend the Drapery; as if blew, with Bice smoothly laid, deepen it with Lake and Indico; lightning it with a fine faint white, in the extreme light places, the which understand of other colours.

II. If the body you draw be in Armour, lay liquid Silver all over for a ground, which being well dried and burnished; shadow it with Silver, Indico, Litmose and Umber, according as the life directs you.

III. For Gold Armour lay liquid Gold as you did the Silver, and shadow upon it with Lake, English

Oker, and a little Gold.

Orthus, Take the finest shell Gold, and lay it flat and Smooth on the place you intend for Armour : when it is dry burnish it all over with a Small Weefels or Dogs tooth, fet in the end of a Pencil Stick, but something longer. For the shadows, temper lake, Roman Oker, and gall stone with a little shell Gold. The Heightnings being burnished, are to be left bright. In the fainter parts of the shadows, use a little shell Gold, and also in the deepest, which must be neatly and sweetly wrought into the Gold. Also take Gall stone, and temper it with fhell Gold, it gives an excellent lufture to all Gold works. In the darkest and deepest shadows, mix a little black. The beightnings are only the first Gold burnished See how to do Silver Armour at Sect. very bright.

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126

IV. For Pearls, your ground must be Indico and white; the shadows black and pink. To express the roundness and lusture of a Pearl, shadow it with Indico, Cherry-stone black, and Pink. Or your Pearl may be laid with a white mixture with a little black, a little Indico and Mastick, but very little in comparison of the White, scarcely to the hundredth part: this being dry, give the light of the Pearl with a little Silver, somewhat more to the light than the shadowed fide; then take a White allayed with Masticot, and underneath the shadowed side, give it a compassing stroke, which shews a reflection, then without that, a small shadow of Sea-cole, undermost of all; but note, your Silver must be laid round and full.

V. For Diamonds, lay a ground of liquid Silver, and deepen it with Cherry-stone-black and Ivory-black: the deeper the shadow, the fairer the Diamond.

VI. For Rubies, lay a Silver ground, which burnish to the bigness of a Ruby: then with pure Turpentine temper'd with Indian Lake, from a small wire heated in a Candle, drop upon the burnished place, fashion-

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ing it as you please with your Instruments, which let lie a day or two to dry: and if it be too long in drying, add to the composition a little powder of Mastick.

VII. For Emeraulds, or any green stone, temper Turpentine with Verdigrise, and a little Turmerick root, first scraped, with Vinegar, drying it, grind it

to fine powder and mix it.

VIII. For Saphires, mix or temper Ultramarine with pure Turpentine, which lay upon a ground of liquid Silver polishe: which must be the ground for all these stones.

To make liquid Gold or Silver: fee the first Section of

the twenty first Chapter of this Book.

IX. For Scarlet, Temper Carmine, and deepen it with Indian-Lake, Or thus, Temper native Cinnabar, and a little Red-lead, and shadow it with Indian-Lake.

X. For Crimfon, Temper Cinnabar, Lake and

White: deepen it with Lake.

XI. For Carnation, Temper Lake and White, and deepen or shadow it with Lake. For a Peach Colour, Temper Carmine and a little White; and deepen or shadow it with Lake.

XII. For a Violet, Temper fine Dutch-Bice and Lake; and deepen it with Indico. For a Purple, Temper Bice and Lake, and a little White; and deepen it

with Lake and Indico.

XIII. For an Orange: Temper the best Red-Lead, and a little fine yellow Masticote; shadow it with Gall-stone and Lake. For an Orange Tawney: Temper Cinnabar, light Pink, and a little yellow Masticote; fliadow it with Gall-stone and Lake:

XIV. For a Sea-Green: Temper Bice, Pink, and White: and deepen it with Green Pink. For a French Green: Temper light Pink one part, with Dutch-bice

fix parts; and deepen with green Pink.

XV. For

XV. For Sky: Temper Ultramarine with a little White; and deepen with Indico. For Poppings: Temper Pink and a little Indico: and deepen it with Indico

XVI. For Seram: Temper yellow Masticote with a very little Cinnabar; and deepen it with dark Pink. For a Lyon Tawney: Temper Red-lead and Masticote.

and deepen it with Umber.

XVII. For Ash colour, Temper Cherry-stone and White; and deepen it with Ivory black. For a bright Red: Temper Indian Lake with native Cinnabar: The Inaian-Lake is the best of all other Lakes; but it being very scarce and dear, you may use Florence-Lake instead thereof.

XVIII. For all colours where Dutch-Bice is used, be fure to make choice of that which is very fine, or elfe you will find, that in working, it will lye very

rough and uneven, and not cover well.

XIX. And be fure that when you temper any of these colours for a Complexion or Garment, you temper it on your Pallat or shell with your finger; and temper them very well to mix them altogether, to make a good mixture and not too waterish.

XX. Be fure also to preserve all your colours from dust, and before you temper either in the shell or upon your pallat, to brush off with a large Pencil or Hairs

foot, or to blow it off-

XXI. In drawing of Cloths, be extream careful in habiting every one, according to the degrees and Functions of the person described, giving them also

their right and proper colours.

For Example, the Virgin Mary is commonly reprefented in Purple and Azure. John the Evangelist in Scarlet. John Baptist in a Hairy Mantle. The rest of the Apostles in Green or Crimson.

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XXII. There are two ways of working Drapery, The firstway is that which the Italians use; which is done with the point of a Pencil and hatching it. Some places are touched all over alike, yet so, as when it is finished, you may perceive the Parchment appear in several places, quite through the work, which is indeed too slight a way, and ought not to be called Limning, but Washing.

XXIII. The fecond may, which is the best. First lay a good full flat ground all over where you design your Drapery, of what colour you would have it this done, you will find it much easier to work upon; and you may either heighten or deepen it, according

as your ingenuity or the Life shall direct you.

XXIV. If you would have the Drapery blew, you may take an indifferent large Pencilwith Ultramarine, or instead of that, Dutch-Bice well prepared; let your Pencil be almost full of either of these colours, and therewith lay the colour even and smooth, all over the place you intend for Drapery: this you may deepen with Lake and Indico. Heighten very faintly, and fair in the extreamest lights: the like observe in all other colours of Drapery whatsoever.

XXV. Crimson Velvet, Red, Green, and Blew, may be heightned with fine shell Gold, it gives a most admirable ornament in cloth of Gold, especially if you mix some of the Gold, with the ground colour it self, which will make it much the fairer. Thus great Painters heightned all their works of Architecture and Buildings, especially in stately Rooms and

Palaces.

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XXVI. Be fure that you draw the out-lines of the Garment very true and faint, because the whole grace of a picture consists much in the outmost draught, and more than in the curious work within. To do this,

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you must sute the Garments to the body, and make them bend and yield with it, and not strait and stiff where it bendeth. To fit the Garments rightly to the body; observe which part of the body bends in or out, that the Garments may answer to the body

upon the least turning any way.

XXVII. That the Garment may turn with it, you must observe where the body should be, if it were bare, and there form the Garments in the right places, making them to bend or fit out, according to the Joynts and Limbs, and sometimes plainly to appear through the Garments, and especially where they are driven by the wind, or any other action to lye loose from the body. In this case express them

lightly, and with a kind of transparency.

XXVIII. Begin at the upper part of the Garment, and fo draw down that part of the Garment (on both fides) that lies close to the body, before you draw the loose parts, that fly off from the body: for if you draw the loose parts first, before you have finished those parts which lye close to the body or its parts, you will be presently out, and be apt to draw the body awry. Therefore some great Artists draw lightly the naked body first, and put on the Garments afterwards, by which means they can better see to place the Cloathing rightly, and to hang even upon the body.

XXIN. You must also draw the greatest folds first, and so strike the greater folds into the less; and be sure that you make not one fold to cross another. Break also some of the folds into less, and make them the narrower, where the Garments sit closer. Otherve also to order your Drapery so, that the folds may fall all one way, especially in a standing Figure, though it will be otherwise sometimes in a

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Figure that is drawn fitting. For the Garments of a standing Figure, are lyable to be driven by the Air and therefore must be placed one way. Be fure also not to make folds, where the Garment should fit streight and close, as the Breasts, Knees, Thighs, &c., which bear them out, and therefore in such places ought always to six plain.

XXX. To shadow in Linnen: use black, white, a little yellow, and less blew: the black must be deep ned with burnt Ivory, with which mix a little Lake, and Indico, or Litmose-blue. For greater variety of Colours and Mixtures, see Chap. 20. beforegoing.

XXXI. As for Sattens and Silks, and all other shining Stuffs, they ought to have certain bright reflections, exceeding bright, with sudden light Glances, especially where the light falls brightest; And so by how much the Garment falls the more inward from the light, by so much the Reslexions will be the less bright. The like is seen in Armour, Brass-Pots and Kettles, or any Glistering Metal, where you see a sudden brightness in the middle or Center of the light, from the shining quality and disposition of those things.

XXXII. Chased, Embossed or spining Armour. The lighter places of it must be sparkling, which you may express by raising the high and round places, with a Temper of Gall-stone, and Roman Oker, by touching with your pencil full of the Colour of it, over and over, in one and the same place, till the Touches be raised above the other work. Then cover over the raised work, with the finest shell Gold, (that is made at Antwerp) and burnish it with a Weesels Tooth; and the like if it be Silver Em-

boffed.

XXXIII. Silver Armour. Take shell Silver, and lay it on, as you did the Gold (at Sect. 3. above,) and burnish it also when it is dry, as you did the Gold. For the shadows, temper Lake and Indico. with a very little Umber: work all the shadows down even and fmooth, according to what you obferve in the Life. The heightnings are to be left (the Silver being brightly burnished) as in the Gold. The thinner part of the shadows, being part of the depth of the shadows, must be tempered with a little shell Silver, and sweetly and neatly wrought into the Silver, being laid very flat and even as before mentioned. Cherrystone burnt, Dark Pink, and Rust of Iron, are a very good shadow for Embossed Silver Armour: fo also is Ivory Black mixt with Dark Pink.

#### CHAP. XXVII.

Of Limning Landskip.

A LL the variable expressions of Landskip are innumerable, they being as many as there are men and fan-

cies; the general rules follow.

I. Always begin with the Sky, Sun-beams or lightest parts first; next the yellowish beams (which make of Masticot and white) next the blewness of the Sky, (which make of Ultramarine or Smalt only:) for purple Clouds, only mix Lake and white.

II. At first working, dead Colour all the Piece over, leave no part of the ground uncovered, but

lay the Colours smooth all over.

III Work the Sky downwards, towards the Horizon fainter and fainter, as it draws nearer and nea-

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rer the earth, except in tempestuous Skies: the tops of mountains far remote, work so faint that they may appear as lost in the Air.

IV. Let places low, and near the ground be of the colour of the earth, of a dark yellowish, or brown, or green; the next lighter green; and so successively as they lose in distance, let them abate in colour.

V. Make nothing which you fee at a distance perfect, by expressing any particular sign which it hath, but express it in colours, as weakly and faintly as the eye judgeth of it.

VI. Always place light against darkness and darkness against light, by which means you may extend

the prospect as a very far off.

VII. Let all shadows lose their force as they remove from the eye; always letting the strongest sha-

dow be nearest hand.

VIII. Laftly, Take Ifinglass in small pieces half an ounce, fair Conduit-water two quarts, boil it till the glass is dissolved, which save for use with which mix spirit or oyl of Cloves, Roses, Cinnamon or Ambergriese, and lay it on and about the Picture where it is not coloured (less it should change the colours: but upon the colours use it without the persumes) so it will varnish your Pictures, and give them a gloss, retaining the glory of their colours, and take from them any ill scent which they might otherwise retain.

See the way of tempering Colours for Shadowing, in

Chap. 22. Sect. 13. aforegoing.

IX. For Trees you must have a dark Green, which you may make by mixing Verditer with Pink and Indico: the deepest shadows of all in Green, are made with Sap-Green and Indico.

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X. To preserve your Colours in Limning.

Take Rosemary-water double distilled, or pure Spirit of Rosemary, and with a few drops of it, temper your shell of white. However dead and faded it was before, it will instantly become perfect white. This Water or Spirit hinders also the Bubbles in White and Umber, which are troublesome in Grinding.

#### CHAP. XXVIII.

Of Light and Shadow.

I. Lights and shades set in their proper places in such a just and equal proportion, as Nature doth give, or the life require, give a true Idea of the thing we would represent; so that 'tis not any colour whatsoever, nor any fingle stroak or stroaks which is the cause thereof, but that excellent Symmetry of Light and Shadow, which gives the true resemblance of the light.

II. In shadowing, be careful you spoil not your work by too gross a darkness, whether it be hard or

foft.

HI. This Observation of light and dark is that which causeth all things contained in your work to come forward or fall backward, and makes every thing from the first to the last to stand in their just places, whereby the distance between thing and thing seems to go from you or come to you as if it were the work of Nature it self.

IV. Suppose it were a plaister Figure, take good notice what appears forwards and what backwards, or

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how things fucceed one another; then consider the cause which makes them in appearance either to incline or recline, and consider the degrees of light and darkness, and whether they fall forward or backward, accordingly in your draught give first gentle touches, and after that heighten by degrees according as the example and your own ingenuity shall direct.

V. Those parts are to be heighten'd in your work which appear highest in your Pattern: The greatest life which we can give on white paper is the paper it felf, all leffer lights must be faintly shadowed in proportion to their respective degrees. But on coloured paper white Crions and Tobaccopipe-clay are used for the first and second heightenings, putting each in their proper places, as more or less light is required, which is a fingular observation in this manner of drawing. Then you must take heed you heighten not too many places, nor heighten any thing more than what is needful, nor too near the dark or shadows, or any out-line, (except where you intend fome reflexion,) left your work thew hard and rough. In heightening, or fuch figures as require great light, put the greatest light in the middle, and the lesser towards the edges for the better perspicuity of your work. Laftly, leave sufficient faint places on the ground of your paper between your lights and shades, that they may appear pleafantly with a fingular plainness and smoothness.

VI. Reflection, is to be used in delineating, glittering, or shining bodies, as Glass, Pearl, Silver, &c. let the cause of the reflection, be it more or less, be seen

in the thing it felf.

VII. In plain drawing, lay all your shades smooth, whether it be in hatching or smutching, keeping every thing within its own bounds, and this is done

by not making your shades at first too hard, or put-

ting one shadow upon another too dark.

VIII. Observe that the greater parts of light and shadows, and the small parts intermixt in the same, may always so correspond as thereby to make more apparent the greater.

IX. In Pictures, let the highest light of the whole, (if any darkness stand in the middle of it) appear more dark than indeed it is: and in working always compare light with light, and dark with dark, by which you will find the power of each, and the gene-

ral use thereof in all operations.

X. Let all your lights be placed one way in the whole work, whether in the Figure, Face, or Garments. If the light fall fideways on the Picture, you must make the other side which is farthest from the light darkest, and let the lights be placed all together on the other side, and not consusedly on both sides, as if it stood in the midst of many lights, for the body cannot be lightned equally in all places. But when you express a Dungeon or Prison with a Torch lighted in it, you must observe that every thing in it, as well as the Garments, must receive their lights from it, and therefore must be shadowed all on the contrary side, which observe in all shadowings of the same kind.

XI. The true and natural disposition of light, is that which gives the principal grace to a Picture, for that without its due light, is clearly another thing; and although so, it may be beautiful in its kind, so far as it is wrought; but if afterwards it shall be shadowed without judgment and Art, so that the shadows be confusedly placed, where the lights ought to be; or contrariwise, the lights where the shadows should be; and the Concavities and Con-

vexities

wexities out of their natural fituations, the work will not only be confused, but wholly spoiled: whereas on the contrary having lights rightly disposed, it so mightily adds to the perfection of the Figure, that it makes the Flat or Plane seem to be imbossed.

XII. And thus *light* rightly disposed, does that in the *Painters* work, which *substance* or *matter* does in the *Carvers* work; insomuch that they seem to be Imbossed outwards, such is the force of *light* and *spadom*: and herein you will find admirable *scenes* and *swesportnings*, proceeding purely from the true disposition of the *light*; without which the Figure would not only be imperfect, but lose also much of its grace, though otherwise well proportioned and placed.

XIII. This *light* is the cause or formal reason whereby coloured things are seen, whose Shapes and Images pass to the Phantasy, and especially inlighten the eyes in which the Image is formed; which first passet to the Common-sense, afterwards to the Phantasy, and last of all to the understanding; whereby every thing is discovered to be what

indeed it is.

XIV. In respect of this light, three things occurr to our visive faculty, viz. the visitual lines, the coloured body, and the faculty of seeing, which is in

the eye.

XV. The Visual lines lightned, (which are the proper subject of Perspective) come to the eye in a Pyramidal form, the base of which Pyramis resteth in the object; and the Cone or Angle thereof comes to the eye more blunt or obtuse, if the said object be near; but more sharp or acute, if it be farther off, whereby it is not so clearly or easily discerned, as otherwise it would.

XVI. The

XVI. The coloured Object or Body, comes not to the eye, but its visible species or shapes are diffused through the clearness of the Air unto the Eye; which species are only certain Images like those we see in a Glass: And if the coloured body stand near to this Image, it comes to our eye in the same quantity and bigness of the Angle of the Pyramis, which being obtuse or blunt, makes the Image seem as great as indeed it is, and so discerned the more distinctly: but if far off, the visible species appears less, according to the proportion of the distance and acuteness of the Pyramidal Angle.

XVII. The faculty of feeing is formed by the Concurrence of the other two things, viz. the visual lines, and the coloured body; which informeth the eye by reducing it from meer Ability into Act, and so performing its operations, and causing the thing also to be seen more apparently and diffinctly.

XVIII. From hence it is apparent, that the felffame body cannot be equally lightned in all places.

1. Because the light doth not directly illuminate any more than that part which is directly opposite to it; the other parts which are oblique to it are illustrated more impersectly, by reason of the interception or obliquity of an opake body, through which its beams cannot pierce.

2. From the several distances of the eye to the parts of the same body; for as the first part of the body is seen and placed nearest the eye, and so comes to it with a more obtuse Angle, so being more lightned, it is also seen more distinctly, whereas the other parts being farther off, come to the eye in a more acute Angle, and being lesser lightned, cannot be so plainly seen.

XIX. If two, three, or four men flood one behind another, all of them equally receiving the light;

yet in respect of your eye they do not; and therefore by the former Doctrine, you must paint the second which is farthest off from the eye darker, the third darker than that, and the fourth darkest of all, and so on if there be more, till the eye can see no farther. The reason is because the second standing farther off, comes to the eye with a lesser Angle (as aforesaid) whereby it cannot be seen so evidently as the first, the same reason is for the third, fourth, fifth, &c.

XX. The same thing is also to be understood, if the visible species of one or many objects be seen sideways, for according to their distance and obli-

quity to the eye, fo you must shadow them.

XXI. That part of the body must be made lightest, which has the light most opposite to it: if the light be placed above the head descending; then the top of the head must be made lightest, the shoulder next lightest, and so you must shadow, by losing the light by degrees: That part of the body which stands farthest out, must be made lightest, because it comes nearest to the light, and the light loses so much of its brightness, by how much any part of the body bends inward, because those parts which stick out, do hinder the Glory and full Brightness of the light from those parts that fall any thing more hollow. Therefore. by how much one part of the body sticks out beyond another, by so much it must be made lighter than the other, and e contrario, fo much the darker.

#### CHAP. XXIX.

Of Colours more particularly.

I. O Ker is a good colour, and much in use for shadows, in Pictures of the life, both for Hair and Drapery: In Landskips it is used for Rocks and High-ways.

II. Pink, the fairest, with blew, makes the fastest

greens for Landskip and Drapery.

Sap-green and green-bice are good in their kind; but the first is so transparent and thin, the other of so course and gross body, that in many things they will be useless, especially where a beautiful green (made of Pink and Bice mixed with Indico) is required.

III. Umber, is a greafie foul colour; but being cal-

cined and ground, it works sharp and neat.

IV. Spanish-brown, is exceeding course and full of gravel; being prepared, it is used for a mixture made of Red-lead mixt with a little Umber, which makes the same colour,

V. Colens earth or Terra Lemnia, it is used to close up the last and deepest touches in the shadows of Pictures of the life, and in Landskips; use it when new

ground.

VI. Cherry stone-black, is very good for Drapery and black apparel: mixt with Indico, it is excellent for Satten; it appears more beautiful or shining if mixed with a little white: if deepned with Ivory-black, in hard reflections, and strong deep touches, it is wonderful fair.

VII. Ivory black, it ferves for a deep black, but is not easie to work without it be well tempered with Sugar-candy, to prevent peeling.

VIII. Red-

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VIII. Red-lead, well wash'd, is a good colour, but Vermilion for those pieces which require an exquisite redness.

IX. Indian-lake, is the dearest and most beautiful of all ordinary reds; it is to be ground as white-lead, and mixt with a little white Sugar-candy and fair water, till the colour and Sugar-candy be throughly disfolved, which being dry will lie very fast, without danger of cracking or peeling.

#### CHAP. XXX.

Observations of making some Original Colours.

I. To make white-lead.

Put into an earthen pot or Crucible several plates of fine Lead, cover them with White-wine Vinegar, covering the top of the pot close with clay, bury it in a Cellar for seven or eight weeks, and you will have good white lead upon the plates, which wipe off.

II. To make Verdigrise.

This is made by hanging plates of Copper over the fumes of Aqua fortis, or spirit of Nitre, or by dipping them in the same or in Vinegar.

III. To make an Emerald Colour.

Take Verdigrise in fine powder, which temper with varnish, and lay it upon a ground of liquid Silver burnisht, and you have a fair Emerald.

IV. To make a Ruby colour.

Mix the same with Florence Lake, and you shall have a very fair Ruby colour.

V. To make a Saphire Colour.

The same, viz. Verdigrise mixt with Ultramarine, makes a glorious Saphire.

VI. 70

VI. To make a Crimfon Velvet.

Take Turnfole and mix it with Indian-lake (well ground with gum and Sugar-candy) lay it full, and when it is wet, wipe away the colour with a dry pencil, where you would have the heightning of the Crimfon Velvet appear, and the ftronger reflections will be well expressed.

VII. Tomake a Silver black.

Take fine Silver filings or plates, which diffolve in spirit of Nitre or Aqua fortis, and evaporate to driness, or precipitate cum Oleo Sulphuris or Salt-water, and you shall have a snow-white precipitate, which mixt with water makes the best black in the world, to dy all manner of Hair, Horns, Bones, Wood, Metals, &c.

VIII. To make a Murry or Amethyft.

It is made of Indian Lake ground with Gum-Arabick water only.

IX. Tomake a Red or Ruby for Limning.

It is made of Indian-Lake (which breaks off a Scatlet colour) ground with Gum-water and Sugar candy.

X. To make Azure blew, or Saphire.

It is made of Ultramarine of Venice (which is best) the best blew Smalt; or blew bice ground with gumwater only: you may make good shadowing blews of Indico, Flory and Litmose, all which need no washing, nor Litmose no grinding, but only insufed in a Lixivium of Soap-ashes.

XI. Tomake a Green or Emerald.

It is made of Cedar green: in place whereof, take Green-bice to draw with: Pink is good also for Landskips, mixed with Bice-ashes; as also with Masticot and Ceruse.

XII. To make a Yellow or Topaz:

It is made of Masticot which is the best, of which there

there are divers forts, viz deeper and paler: Yellow-Oker also for want of better may do. Shadow Masticot with Yellow-Oker deepen it with Oker de Luce.

XIII. To mak Ultramarine.

Take the deepest coloured Lapis Lazuli (having few veins of Gold upon it) heat it red-hot in a Crucible close covered, then quench it in Urine, Vinegar or water in a Leaded earthen pot, dry it well, then with a pair of pinsers nip off the hard, gray, and whitest part from it, and grind the remainder with honied water as fine as may be, then dry it for use. The honied water is made of water a quart, boiled with honey two spoonfuls.

#### CHAP. XXXI.

The sum of the Observations of Limning to the life in general.

I. LET the Table be prepared very exactly by the fifth rule of the twenty third Chapter of this fecond Book.

II. Let the ground be of flesh colour, tempering it

according to the complexion to be painted.

III. If it be a fair complexion, mix a good quantity of Red and White-Lead together formewhat thick.

IV. If swarthy or brown, mix with the former a little fine Massicot or English Oker, or both, always observing that your ground be fairer than the complexion painted.

For fairness may be shadowed or darkened at pleasure; but if it be sad or dark you can never heighten it for in Limning, the picture is always wrought down to its exact colour.

V. Lay the ground upon the Card or Tablet, with a larger pencil than ordinary, free from spots, for a ches

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of the pencil, or dust, and as even as possible may be; and let the colour be rather thin and waterish than too thick, doing it very quick and nimbly with two or three dashes of the pencil.

VI. This done, prepare your fladows in order, by the seventh rule of the four and twentieth Chapter of

this second Book.

VII. Then draw the out-lines of the face with Lake and white mingled together very fine; fo that if you should mistake in your first draught, you may with a strong stroak draw it true, the other line by reason of its faintness being no hinderance.

These lines must be truly drawn, sharp and neat, with

the greatest exactness imaginable.

VIII. Observe the most remarkable and deep shadows, which keep in memory when you go over them with more exactness; drawing out also (if you so please) the shape of that part of the body next adjoining to the face, viz. a little beneath the shoulders, with a strong and dark colour, which in case of mistake in proportion may easily be altered.

IX. The first sitting is to dead colour the face: the second sitting is the exact colouring and observation of the several shadows, graces, beauties or deformities, as they are in Nature: the third sitting is making smooth what was before rough and rude; clothing what was naked, and giving strong and deepning touches to every respective shadow.

X. The dead colour is thus made.

Take of the aforesaid ground (at the third or fourth Section of this Chapter) and mix it with fine Red-lead, tempering it exactly to a dead colour of the cheeks and lips, having a great care, that you make it not too deep; which if light, you may do at pleasure.

XI. The

XI. The face is farth begun to be coloured in the reds of the cheeks and lips, and fomewhat strongly in the bottom of the chin (if beardlets) also over, under, and about the eyes with a faint rednets.

XII. The ear is most commonly reddish, as also

fometimes the roots of the hair.

XIII. The ground being wash'd over with this reddish or dead colour, let the shadows be as well

bold and firong as exact and curious.

A good Picture, if but dead coloured only, and seeming mear hands very rangh, uneven and unpleasant, yet being buldy and strongly done and shadowed will appear very smooth, delicate, and near if but virwed at a distance from the eject Therefore curiosity and neatness of Colour; is not so much to be regarded, at bold, losty, and strong expressing what is seen in the life, not so the use of the XIV. Thereext things to be done is the use of the

Alvo Thenext thing to be done is the use of the faint blews, about the corners and balls of the eyes and temples, which you must work out exceeding

fweetly, and faint by degrees.

XV. Always be fure to make the hard shadows fall in the dark side of the face, under the nose, chin, and eye-brows, as the light falls, with somewhat strong touches.

XVI. The light shadows being done and smoothed, work the hair into such forms, curlings, and dif-

positions as best adorn the piece.

First draw it with colours, neatly and to the life then wash it roughly as the rest; and the next time perfect it if siling up the empty places with colour, and the partings

thereof with blew.

XVII. And ever remember, when you would have your colours or shadows deep, strong, and bold; that you do them by degrees, beginning faintly, and then encreasing the same.

XVIII. First

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XVIII: First, the the flamed dolours in the same places again, driving and dweetning them dute one another, that no part may look uneven, or with an edge or patch of colour, but altogether equally mixt and disperfed, lying soft and smooth, like smook or vapours.

AIX. Secondly, this work being done for an hour or two, lay the ground for behind only Picture of Blew, or Crimford like to a Sattin or Velvet Currain.

XX. If blew, let it be done with Bice well tempered in a shell: First draw the out-lines with the same colour, with a small pencil: then with a thin and waterish blew wash over the whole ground with a larger pencil: lastly, with thicker colour cover the same which you before wash'd, swiftly, that is dry not before all be covered, to will it lie smooth and even.

XXI. If Crimfon, work with Indian take, in those places where the strong lights, and high reflections fall, let the light be done with thin and waterish Lake; the deepning and strong shadows, close by the light with thicker colour: this done, the Picture will be much changed; the beauty of these grounds will much darken and deaden it.

XXII. Let the apparel with fuitable colours be done only flat with heightening or deepning; and then go over the face again, reducing the shadows to smoothness and neathers with a sharp and curious pencil: drawing the eyes, the lines of the eye-lids; redness of the nostrils; shadow of the ears; deepness of the eye-brows, and those other remarkable marks of the face: so sweetning the out-lines of the face (by darkning the ground, above from the light side, and believe on the dark side) that when the work is done, the ground

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ground may stand as it were at a distance from the face behind; and the face may seem to stand off forward from the ground.

XXIII. Then go over the hair, making it light or deep by the life: and in apparel make the feveral folds and fhadows, and what elfe is to be imitated, as it is in the life it felf; lightning the lines with the purelt white, a little yellow and some blew; and deepening with Ivory black, and heightning with black mixed with a little Late or Indico.

XXIV. This done, and the perion gone, your work being yet rough, by your felf politie it, and ftrive to make it fmooth and pleafant, filling up the empty places, and fweetning the shadows, which yet lie uneven and hard.

XXV. The apparel, hair, and ground being finifled, now give strong touches for the rounding of the face; and observe whatsoever may conduce to likehels and resemblance, as moles, smilings, or glancings of the eyes, motion of the mouth, &c. for which purpose, you may find an occasion of discourse, or cause the person to be in action, and to look merrily and chearfully.

XXVI. Laftly conclude, that the eye gives the life; the nose the favour; the mouth the likeness; and the chinche grace.

XXVII. In fair coloured Drapery, if the lightning be done with fine shell Gold it will add a most wonderful lusture and be a singular ornament to your work, and if this Gold be mixt with the very ground it self,

the apparel will appear much the fairer.

XXVIII. The Dead colouring of a whole figure defigued for Hilberical Limning.

It is twofold. 1. To temper a fresh colour somewhat lighter than you intend it to be after it is wrought

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down by the Variety of shadowing mixtures, which flesh colour you must temper in a large shell, because it requires a quantity; it must be of a good mixture. neither too thick nor too thin; then take a Goofequil-pencil full of the same colour, and lay it on quick. even, and smooth, on the place where you design the Figure: if you be not very nimble in the laying it on. 2. The other way is thus. Init will not lye even. stead of flesh Colour, make use of the best Lake-white, well prepared, and lay it on with the same fized Pencil as before mentioned, and so your dead Colour is as the Oyl-painters do, which must be done free, rough and boldest of all. But note, That you draw all the out-lines of your figure first with a Temperature of Lake and White, before you lay the ground Colour for the flesh. Also, in dead colouring, leave not your shadows too dark, harsh, or hard, next to the light, but faint, even and misty. This done, mix Flake-White, and a little Red lead, with which touch all the deep places both in Face and Body, as your ingenuity, or the life shall direct you: this do extream faint, because if you lay it too dark, you cannot heighten it up again, without running the hazard of spoiling of it, but if too light, you may deepen it by degrees at your pleasure. In the face make a delicate faintness, or faint Red inclining to a Purple, under the Eyes; then touch the tips of the Ears, with the aforementioned mixture, as also the Cheeks, Lips and the bottom of the Chin and fo go on to the foal of the foot touching in all the following Muscles and places with this glowing colour. Then mix Gallstone and Pink, for the gener ral yellowish glowing shadows, and in some places add to the former mixture or temperature, a little Lake. More over you will perceive in the life, a faint blewish colour in some parts of the body, which you may express with a temperature or mixture of Indico and White, and fo proceed according to the subject you draw after, whether the life or copying after Painting. All these shadows are to be expressed after the manner of hatching with a Pen, with gentle and faint strokes washing it

along.

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XXIX. But in this Dead colouring 1. See that you cover your ground-colour with the aforesaid Red and other shadows. 2. Be not too curious in the first working, but rather make choice of a good, free, and bold following of nature, than to affect an extream neat, fet, or starcht way. 3. Let not the roughness of your colour discourage you, for that is to be wrought down and couched by degrees with the other shadows, but not at first. 4. Then by degrees sweeten and heighten your shadows according as the light falls. s. In some places touch it with strong touches and in those places bring your work up together, to an equal roundness and strength, not finishing any part of the figure before the other, but visiting and working all the parts curioufly alike, but in a manner at Random. 6. Then observe the roundness, colouring, and shadowing, or what ever elle is requifite to the perfection of the Work. 7. Having done with the fainter shadows, sweeten and work them into the Red still. 8. Carefully observe all the variety of colouring, and with your pencil curiously delineate, those several varieties of nature which you had rudely traced out be-9. To do this, make use of the same colour in the fame places as you did before, working, driving, and sweetening the same colours one into another; that nothing be left in your work with a harsh edge, uneven, or in a lump, but all as it were fweet, or driven one into another with the point of somewhat a sharper pencil than you use at first, so that your sha. L 3

371

dows may lye dispersed, soft, sweet, smooth, and gently extended one into another like Air. 10. Lastly, observe, that Skies, Waters, Trees, Plants, Flowers, and Ground, are all to be dead coloured before the Figures.

XXX. How to draw with Indian Ink.

It is done after the manner of Washing: Or, instead of the Indian Ink, you may temper Lamp. black: or bread burnt: Take your Indian Ink, or Lamp-black, and temper it with fair water, in a shell, or upon your hand, your out-lines being drawn with Cole, or Black-lead, take an indifferent long sharp pointed pencil, dip the point into fair water, then dip the pencil into Indian Ink, and draw all your out-lines very faint; (note that all the temperature of Indian Ink must be thin and waterish, not too black) when it is dry, take a little bit of stale white bread, and rub out the out-lines which you drew with the Cole, (if too black) then dash on your shadows very faintly, and deepen it by degrees, as you shall think convenient, and finish it with Stipples, it being most advantagious to any one that shall practife Limning. Beware of taking too much colour in your pencil, which you may prevent by fire drawing it through your lips. In laying on your shadows, never lay them too deep, but dee pen them down by degrees; for if too deep you can never heighten them again.

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Of Linning Landskip, more particularly.

I. TO make the Tablet for Landskip.

realization and artificial resums of Sol marks

Take a piece of Vellom, and space it this upon a Frame, fastning is with paste or glow, and pasting is upon a board, and these manner of Tablets are altogether used

in Italy for Landskip, and History.

II. If you draw a Landskip from the life take your station from the rise of ground, or top of an hill, where you shall have a large Horizon, marking your Tablet into three divisions downwards from the top to the bottom; then your face being directly opposed to the midst of the sinitor, keeping your body fixed, depict what is directly before your eyes, upon your Tablet on your middle division, then turning your head (not your body) to the right hand, depict what is there to be seen: adjoining it to the former. In like manner daing by that which is to be seen in the left hand, your Landskip will be compleated.

III. Make every thing exact, not only in respect of distance, proportion and colour; but also in respect of form, as if there be Hills, Dales, Rocks, Monntains, Cutaratts, Ruines, Aquadutts, Towns, Cities, Castles, Fortifications, or whatsoever else may present it felf to view; making always a fair Sky, to be seen afar off; letting your light always descend from the left hand

to the right.

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IV. In beginning your work, first begin with a large Skye; and if there be any shining or reflexion of the Sun, beware you mix no Red-lead in the Purple of the Sky, or Clouds, but only with Lake and white:

white: the yellow and whitish beams of Sol work

with Masticot and white.

V. Then with a fresh or clean pencil finish the blewish Sky, and Clouds, with smalt only: at the first working, dead all the work over, with colours suitable to the Air, green Meadows, Trees, and Ground, laying them somewhat smooth, not very curiously, but slightly and hastily; make a large Sky, which work down in the Horizon, faintly, but fair; and drawing nearer to the Earth, let the remote Mountains appear sweet and misty, almost indistinguishable, joyning with the Clouds, and as it were lost in the Air-

VI. The next ground colour downwards must encrease in magnitude of reason, as nearer the eyes, somewhat blewish or Sea-green: but drawing towards the first ground, let them decline into a reddish or popinjay-green: the last ground colour, must be nearest the colour of the earth, viz. a dark yellow, brown and green; with which, or some colour near it, you must make your first Trees; making them, as they come near in distance, to encrease proportionably in colour and magnitude, with great judgment: the leaves slowing and falling one with another, some apparent, others lost in shadow.

VH. Let your Landskip lie low, and as it were under the eye (which is most graceful and natural) with a large and full Sky not rising high, and lifting it self into the top of the piece, as some have done.

VIII. Be fure to make your shadows fall all one way, viz. to make light against darkness, and darkness against light; thereby extending the prospect, and making it to shew as a far off; by losing its force and vigour, by the remoteness from the eye.

ne ft IX. In touching the Trees, Boughs and Branches, put all the dark shadows first, raising the lighter leaves above the darker, by adding Masticot to the dark green, which may be made with Bice, Pink, and Indico: the uppermost of all, exprest last of all, by lightly touching the exteriour edges of some of the former leaves, with a little green, Masticot, and white: the darkest shadows you may set off with Sap-green and Indico.

X. Trees and their Leaves, Rivers, and Mountains far distant, you must strive to express with a certain real softness and delicateness: in making Cataracts, great falls of Waters, and Rocks, you must first lay a full ground near the colour, then with a stronger in the dark places, and slight heightening in the light: remarking all disproportions, cracks, ruptures and various representations of infinitely differing matters; the manner whereof is abundantly exprest, in almost every Landskip.

Horat. Epod. 16.

Vos, quibus est virtus, muliebrem tollite luctum, Etrusca præter & volate littora.

Nos manet Oceanus circumvagus; arva, beata Petamus arva, divites & insulas:
Reddit ubi Cererem tellus inarata quotannis, Et imputata floret usquè vinea.
Germinet & nunquam fallentis termes olivæ, Suamque pulla ficus ornat arborem.
Illis injussæ veniunt ad mulctra capellæ; Resertque tenta grex amicus ubera.
Nec Vespertinus circumgemit ursus ovile;

Nec intumescit alta viperis humus:

Pluráque felices mirabimur: ut neque largis
Aquofus Eurus arva radat imbribus,
Pinguia nec ficcis urantur femina glebis':
Utrumque rege temperante Coelitum.
Non huc Argoo contendit remige pinus,
Neque impudica Colchis intulit pedem
Non huc Sidonii torferunt comua nautæ,
Laboriofa nec cohors Ulyffei.
Nulla nocent pecori contagia, nullius aftri
Gregem æftuofa torret impotentia.
Jupiter illa piæ fecrevit littora genti,
Ut inquinavit ære tempus aureum.

You nobler fpirits, hence with womens tears. Sail from Etruscan confines free from fears: The Earth-encirc'ling Ocean us invites, Rich Mands, Fields, Fields blest with all delights. Where Lands untill'd are yearly fruitful feen, And the unpruned Vine perpetual green. Sill, Olives by the faithful branch are born, And mellow Figgs their native Trees adorn. There, milchy Goats come freely to the pail, Nor do glad flocks with dugs distended fail. The nightly Bear roars not about the fold, Nor hollow earth doth poisonous Vipers hold, Add to this happiness, the humid East Doth not with frequent showres the Fields infest. Nor the fat feeds are parcht in barren land, The powers above both temp'ring with command. No Bark came bither with Argoan oar, Nor landed wanton Colchis on this (hoar: Cadmus with filled fails turn'd not this way. Nor painful troops that with Ulyffes stray. Here among ft cattle no Contagions are, Nor feel flocks droughty power of any star.

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When brass did on the Golden Age intrude, Jove for the pions did this place seclude.

# CHAP. XXXIII.

Of the various Forms or Degrees of Colouring.

I. There are four various Forms or degrees of colouring, viz. 1. Of Infants, or Children. 2. Of Virgins, or fair Women. 3. Naked Bodies. 4. Old or

aged bodies.

II. Infants or young Children are to be painted of a foft and delicate complexion; the Skin and ears of a ruddy and pleafant colour, almost transparent; which may be done with White lead, Lake, and a little Red lead; shadowing it thin, faint and soft; letting the Cheeks, Lips, Chin, Fingers, Knees, and Toes, be more ruddy than other parts; making all their Linnen very fine, thin, and transparent, or perspicuous, with strong touches in the thickest folds

III. Virgins and fair Women are as curiously to be express'd as the former, but their Muscles are to be more apparent, their shape more perfect; and their shadows to be of a whitish yellow, blewish, and in some places almost purple; but the most perfect and exquisite direction is the life, which ought rather to be followed than any thing delivered by

rule.

For the shadows here, mix white with Pink; and Indico and white; and in some places Lake, with a little Indico and white. As for Womens Bodies, Viz. such as are naked, they are to be represented soft, round, plump, gentle and tender, and without many Muscles. On the contrary, Mens Bodies are to be represented strong, sturdy, stong

and vigorous, with the Muscles exactly placed and drawn, which to do with Judgment and Understanding, requires

time, study, and knowledge in Anatomy.

IV. Naked Bodies are to be painted strong, lively, and accurate; exactly matching the respective pairs of Muscles and Nerves, fixing each Artery in its due and proper place, giving each limb its proper motion form and situation, with its true and natural colour; all which to do well may be the study and practice of almost ones whole life.

V. Old or aged Bodies ought to be eminent for exact and curious shadows, which may be made of Pink, Lake, and Ivory-black, which make notable shadows, in appearance like the wrinkles and furrows of the face and hand in extream old age: let the eyes be dark, the aspect melancholy, the hair white (or else the pate bald) and all the remarks of Antiquity or

age be very apparent and formidable.

Pink mixt with Lake and Red-lead, makes an excellent shadow for old Mens Bodies: but for the extreamest or deepest shadowings either in face or body, mix Lake and Ivory-black, which will make an excellent deep shadow, and will be very useful in expressing of the Several surrows and wrinkles in the face and hands of people extreamly Aged, with their dark Eyes and melancholy Aspects.

VI. But notwithstanding all the foregoing rules, the posture or form of standing, and being, either of the whole body, or any of its parts, ought diligently to be observed, that the life may be imitated, in which, it only lies in the breast and judgment of the Painter to set it off with such various colours, as may best besit the respective complexion and accidental shadows of each accidental position or posture, which are sometimes more pale, sometimes more ruddy; sometimes more faint, sometimes more lively.

CHAP.

# CHAP. XXXIV.

Of the Limning of the Skie, Clouds, &cc.

I FOR a beautiful Sky, fitted for fair weather, take Bice tempered with white, laying it in the upper part of the Sky, (as you fee need) under which you may lay a thin or faint purple with a small fost brush: working the undermost purple into the uppermost blew; but so as that the blew may stand clear and perfect: then for the Horizon or near the same lay a fine thin Massicot, which work from below upwards, till it mix with the purple, after which you may take a stronger purple, making here and there upon the former purple, as it were the form of Clouds, as nature requires: upon the Massicot you may also work with Minium mixed with Ceruse, to imitate the fiery beams which often appear in hot and clear Summer weather.

II. To imitate glory, with a great shining light of a yellowish colour or the Sun-beams, you must take Masticot or Saffron mixt with Red-lead, and height-

ned with shell gold, and the like.

III. A Cloudy Sky is imitated with pale Bice, afterwards shading the Clouds with a mixture of several colours: a fair Sky requires clouds of a greater shade, with purple: the clouds in a rainy Sky, must be shaded with Indico and Lake: in a night Sky, with black and dark blew smoaky, making a blaze with purple, Minium and Ceruse: the clouds in a Sun rising or setting must be done with Minium, Ceruse and purple, making underneath the clouds scattering stroaks, with Minium and Masticot, or Minium and Saffron;

Saffron; so that the scatterings upwards may appear faint; and below, afar off near the Landskip, somewhat

fierv.

IV. A fiery Sky, let be made with a pale blew, fmoothing it downwards, which afterwards, you must mingle with a strong Red-lead, mixt with Ceruse, making long diminutive stroaks like the Sunbeams upon the blew Sky with which let fall some purple stroaks, much like the said beams; then, sweeten one into another with a soft brush pencil, wet in gum-water, not too strong.

V. Lastly, you may make a fair Sky, by using fair Bice alone, and tempering it by degrees with more and more white, smoothing one into another, from above downwards, and shading it as you shall see rea-

fon and nature require.

## CHAP. XXXV.

Of the Limning of Towns, Castles, and Ruines.

I Those Towns, or Cities, which feem at farthest distance, must have but little shadowing or heightning, and sometimes none at all, these if they appear against the Sky, must be laid with Bice, and a little purple, and shaded faintly with a good blew.

II. Those which lie at a farther distance, must be laid with Bice and purple as aforesaid, and shaded

with light blew, and heightned with white.

III. Those which appear at an ordinary distance, must be done with Vermilion and purple, and shaded

with a strong purple shaded with white.

IV. Those which are near, must be done with Vermilion and white, and then shaded with a strong Vermilion and brown Oker, mixt with white.

CHAP.

# CHAP. XXXVI.

Of Monntains, Hills, and the like.

I. Those Mountains which are next in fight, must be laid with a fair green, and shaded with Sap-green; sometimes with brown Oker, and French Berries, to distinguish them from such as are farther off.

II. Such as lie farther off, must be laid with green, blew, and Masticot, and be shaded with blew, green,

and Verdigrise.

III. Such as lie yet farther, must be laid with some strong blew, white, and Bergh-green, and shaded with strong blew.

IV. Such as lie yet farther, must be laid with strong

blew and white, and shaded with blew only.

V. Such as lie yet farther, with Bice and white, and shaded with Bice.

VI. Such as lie farther off, are only laid with white,

and shaded with a faint Bice.

VII. Fields being near, must be done with a singular good green, the which must always be faintest, according as they are farther distant, heightening them with Masticot, or a light green, and shading with Sapgreen, but not too much: those which lie far, are to be laid with a French berry yellow, made of a blew greenish, shaded with Oker.

VIII. And in Fields, Hills, and Dales (whether near or far off) there are many roads, passages and ways, which must be laid either fainter or stronger ac-

cording to their distance and situation.

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## CHAP. XXXVII.

Of Trees, Boughs, Cottages, and the like.

I. Those Trees of divers colours which stand upon the fore-ground, must be laid with divers colours as with Verdigrise, mixt with other green, or with masticot, and Bergh-green mixt, and then shaded with Sap-green; which you may heighten with Masticot, mixt with White-lead.

II. If they appear yellow, use Verdigrise and Ma-

sticot mixt, and shadow with Verdigrise.

III. If they be of a whitish colour, let them be laid with Verdigrise mixt with White-lead, and shade them with Verdigrise, mixt with Indico faint; heighten them with Ceruse, that they may look of a faint yellow green; or else with a little Indico and yellow.

IV. Those which stand at a great distance, lay with Indico, and white, and shadow with Indico, and height-

en with the same made a little lighter.

V. If Trees be very old with moss upon them, give them the appearance of green and yellow, which commix with Pink, and Bergh-green: if they be of a whitish yellow, do them with Pink and white mixt with a little green.

VI. Country Cottages lay with light Oker, which order according to the newness or oldness of the build-

ing

VII. Cottages of Timber, let be laid of the colour

of Trees and Wood-work.

VIII. Thatcht Cottages if new, lay with Pink, shadow with brown Oker, and heighten with Masticot mixt

161

mixt with white; but if old, lay them with brown Oker mixt with white, and heighten with the same.

IX. Straw colours at a distance are done with Indico and white, mixt fometimes with brown Oker, and shaded with Indico.

# CHAP. XXXVIII.

Of the Colouring of Naked Figures.

I. TOR Women and Children, take the best Flake I White-lead, and a little good Lake, with which if you please you may mix a little Vermilion, but take heed that your mixture be neither too red or too pale, but exactly agreeable to the life it felf; the which in this case is the best director: this being dry, touch the lips, cheeks, chin, fingers, and toes with thin Lake, and then heighten with white mixt with a little Lake or Vermilion:

II. But if you would cover them somewhat brownish, mix with your Carnation, a little brown-Oker; and shade it with Red-Oker, and coal-black with a little

Lake.

III. In old Women take White, Vermilion and Brown-Oker, and give the lustre where it ought to be with Vermilion mixt with a little Lake: shade it with Red-Oker and Lake, or with Wood foot, or Lampblack, and heighten with white mixt with a small quantity of Vermilion.

IV. Dead Children and young Women, paint with Brown-Oker, white and some Vermilion, and shadow

the same with the foot of wood.

V. Dead old Women colour with Brown-Oker mixt with a little white, which shade with a thin foot of wood first, then with a stronger.

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VI. Young men paint with Ceruse, Vermilion and Lake, making it a little browner than for young Women; giving them lustre with Vermilion and Lake, shadowing with Lamp-black and Brown-Oker; and heightning with Ceruse and Vermilion.

VII. Old Men Limn with Vermilion, Brown-Oker, and white; shade with soot and Lamp-black; heighten with Vermilion, Brown-Oker, and white, and

give it a lustre with Lake or Vermilion.

VIII. Dead men colour with Brown-Oker, white, and a little Vermilion, as your discretion shall inform you, and shade with soot, or Lamp-black mixt with a

little Ceruse.

IX. Devils, Satyrs, and the like Limn with brown-Oker, mixt with a little white and red, which mixture let be made fome part whiter, some part browner, and strongly shade it with soot, as your own ingenuity may inform you.

# CHAP. XXXIX.

Of the Colouring of Hair.

I. The Hair of Women and Children is coloured with fimple Brown-Oker, and heightened with Masticot: The same in the hair of men, only making it sadder or lighter as the life requires.

II. Hair which is black may be done with foot, or

Lamp-black, but it will abide no heightning.

III. Childrens Hair is sometimes laid with brown-Oker and White, and heightened with the same; and sometimes with Alom.

IV. Sometimes also they are done with light-oker, and

V. Old Womens Hair with brown-oker and black,

heightned with Brown-oker and white.

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VI. In Gray Hair take more black than white, and heighten with pure white.

# CHAP. XL.

Of Walls, Chambers, and the like.

L COR a brick Wall take Vermilion and white

I and shadow with Red-oker.

II. If the ground of the wall is laid with black and white, shade it with a thin black, if with Red-oker and white, shade it with purple: or with Lake and black, or Red-oker simple.

III. If it be laid with black, white, and purple,

shade it with purple and black.

IV. If the wall belongs to any Chamber or Hall, having Figures or Statues; so order and temper your colours, with such distinction, that the Figures and

Wall be not drowned in each other.

V. Sandy fore-grounds do thinly with brownoker, fad or light as the life prefents; shadow the same with the same brown-oker, and Rocks with Red-oker, according as they are near to, or far from the fight.

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## CHAP. XLI.

Of Marble Pillars, Rocks, and the like.

I. Marble must be done with a good and light pencil, after a careless manner in imitation of Nature, wherein all such stains, colours, veins, and representations of the faces of living things must be carefully observed.

II. The like is to be observed in Rocks, of Sandy colours, and ragged forms; which if seen at a great distance, must be coloured with thin Bice, and then heightned with purple and white, and shaded with Smalt or a deep blew.

III. If they feem near, colour them with brownoker mixt with white, which go over again with Vermilion mixt with white, after which lay here and there some Verdegrise mixt with some other green.

IV. In these works you must make spots, stains and breakings, with hatchings, which shade with the soot of Wood or Lamp-black mixt with a little white.

# CHAP. XLII.

Of the Colouring of Metals.

I. FOR Gold colour, take Red-lead, Saffron, and very light Oker, with which colour all manner of Cups, Difhes and the like, which shade with soot, and heighten with shell Gold.

II. For Silver, lay a thin white, which shade with a thin blew, mixt with a little black, and heighten with shell Silver.

III. For

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All. For Tin and Iron, take white and Indico, and thade it with Indico and Bice, and heighten with white or shell Silver.

1V. For Brafs, take thin Pink, shade it with Indico mixt with green, or with almost all Indico, and heigh-

ten it with shell Gold.

V. For Copper, take Red-oker and white, shade it with Red-oker, and heighten with Red-oker and white, heightning also here and there, where the light falls, with shell Silver.

## CHAP. XLIII.

Of the Colouring of Flowers.

L THE Tulip, draw it first with black-lead upon a white ground, then shade it a little (as for a white Flower) with thin Indian Ink, or with green yellow Ink, or with black-lead ground with thick gum-water; then lay on your several colours resembling Nature, which being dry, shade with a higher colour, and then farther shadow it, according to the nature of the flower: so that being sinished it may be like slame, Red, Blew, Lake, Purple, Spotted, or otherwise, in imitation of the life.

II. The Damask Rose, lay with Lake mixt with white, shadow with the same mixt with thin Lake;

and heighten with white.

III. The green leaves are done with Verdigrise mixt with some *French* berry green, shade it with Verdegrise mixt with Sap-green; the stalks lay somewhat browner with brown-oker.

IV. Red Roses do with fine Lake mixt with white, M 3 shade shade it with brown Lake, and heighten it with Lake

V. White Roses colour with Flake Lead, shade it with white and black (but the chief shadows with a

ftronger black ) and heighten with white.

VI. The little thrums (which fome erroneously call feeds) in the middle of the Rose, lay with Masticot, and shadow with Minium, and heighten with

white.

VII. The Clove gilliflower is done almost like the Red-rose: the specking or spotting of it is done with Lake; those which are lighter, with a lighter red upon a pure white; those like slames with Vermilion and Lake, which slade with a stronger Lake; and speck the white with Lake and Vermilion, to resemble the life.

VIII. The green stalks, or branches and leaves lay

with Bergh-green, and shade with Sap-green.

IX. The Marigold do with yellow Orpiment and Minium, shadow with Vermilion and Lake mixt with Minium; and heighten with white and Massicot.

X. Corn-flowers lay with blew mixt with fome white, shadow with Indico, and shadow with blew and

white,

## CHAP. XLIV.

Of Radishes, Turneps, Melons, Cucumbers, and Cabbage.

I. R Adishes are done with white, shaded with Lake, and as it were behind sweetned with purple: and sometimes with green from the top downwards: The green leaves at top with Verdegrise mixed with Sap-green, shaded with Sap-green, and heightned with Masticot.

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II. Turneps are laid with white, shaded with foot;

III. Yellow Melons with yellow, shaded with brown-oker; the yeins with a stronger brown-oker, and then heightned with white.

IV. Green Melons with Indico mixt with Verdegrife and Sap-green, shaded with Sap-green and In-

dico ; and heightned with Masticot.

V. Cucumbers, the ends with a thin yellow, the middle with green, fweetned the one into the other, and shaded with Sap-green; but the whole fruit with brown-oker, the specks lay with red and black to the life.

VI. Cabbage white with very thin yellow, and in fome places with very thin green (or yellowish green) fweetning with very thin brown-oker mixt with Sap-

green, heighten with pure white.

VII. Cabbage red, lay with purple, shade with Lakmus, and heighten with purple mixt with white.

# CHAP. XLV.

## How to Colour Fruits.

I. CHerries, with Vermilion and fome Brazil, shade with Lake, heighten with Vermilion mixt with white.

II. Heart Cherries in the middle with Vermilion and Lake mixt with white, the Circumference remaining whitish, here and there sweetning them with Lake, and heightning with white, or mixt with a little Lake.

III. A Pear with Masticot, shaded sweetly with brown-oker; its blush with Lake not too high, heighten with white.

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IV. Apples with a thin Masticot mixt with Verdigrife, shade them with brown-oker, and give their blush with a thin or deep Lake (resembling Nature) and heighten with white: if you will have them very high, mix your white with some Masticot, but this must be according to the condition of the Fruit whether ripe or unripe, red, yellow or green,

V. Mulberries with a very strong Brazil, and then lay'd over with black, so that between the stalks and berries they may look a little reddish according to

Nature.

VI. Strawberries with a white ground, which draw over with Vermilion and Lake very thin; shade it with fine Lake, and heighten with Masticot mixt with Minium; and then with white only speck them with Lake, by one side of which put a smaller speck of white.

VII. Wall-nuts with their green on, with Verdigrife mixt with Sap-green, shade with Sap-green

and a little white.

VIII. Wall-nuts without their green, with brown-

oker, shaded with foot.

IX. Blew Plums with purple, shadowed with Bice, and about the stalks with a little green, well sweetned; heighten with purple and white.

X. White Plums and Peaches with thin Massicot, shaded with brown-oker; give them a blush with

Lake, and heighten them with white.

XI. Red and Blew Grapes with purple, shaded

with blew, and heightned with white.

XII. White Grapes with thin Verdigrise (called also Spanish green) mixt with Massicot, shadow with thin Verdigrise; and heighten with Massicot mixt with white,

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## CHAP. XLVI.

Of the Limning of Fowls.

In The Eagle with black and brown-oker, shadow it with black, the feathers heighten with brown-oker mixt with white: the bill and claws lay with Saffron, and shade it with soot or Lamp-black: the eyes with Vermilion heightned with Masticor, or with Saffron shaded or deepned with Vermilion; let

the talons be done with black.

II. The Swan with white mixt with a little black, heighten it with fine and pure white, so that its plumes or feathers by that heightening may look well: the legs with a black colour: the bill with Vermilion, shaded with Lake: the eyes yellow with a black round in the middle; from which falls a blackish vein, descending to the bill.

III. The Goose with more white than black, viz. a light gray, heighten it with a gray white; the legs

with black: the bill like the Swan.

IV. The Duck with a light grey, the head with a dark blew, and dark green neck fweetly enterwoven, the belly with white, the legs with black mixt with a little white, &c. but be fure to imitate the life.

V. The Turkey with black mixt with a little white, from the back towards the belly whiter by degrees, but the belly speck with black, and in like manner the wings: let him be shaded with black, the wings with Indico, shaded with stronger Indico, the bill with black, the eyes blew, heightned with white. He being angry, the naked skin of his neck will be blood red, which lay with Vermilion mixt

with Lake, shaded with Lake: but otherwise lay it of a whitish blew colour.

VI. The Griffon with Saffron, shadowed with

brown-oker or foot.

VII. The Pheafant with grey, made of white and black, the feathers of a white grey, the whole must be shaded with black, and heightened with pure white; the eyes like the Falcon, the legs with Pink, and sha-

ded with black.

VIII. The Falcon with brown oker, and black mixt with white, and shadowed with black, the feathers must be pleasantly drawn with black, and sprinkled upon its breasts; heighten it with white, let his talons be black, above the eyes lay with Saffron, and shade with Vermillon, the bill with grey.

IX. The Stork with grey, heightned with white, and the corners of his wings (near one half) with black, his long bill and legs with Vermilion, fhaded

with Lake.

X. The Owl with Ceruse, black and soot, shadowed with soot, and heightened with yellow-Oker and white, sometimes white alone, the eyes yellow, circled with white, the legs of a brown yellow.

## CHAP. XLVII,

# Of Limning of Beafts,

I. CHeep with a thin white, fhaded with Indico and

oot, and heightened with white.

II. Hogs with brown-oker, shaded with soot, and heightened with Masticot: you may as you see occasion colour the hair here and there with stronger brown-oker;

oker; his eyes with Vermilion, which heighten with Masticot, his mouth with Indico, or white and black, shaded with black.

III. A Bear with brown-oker, red-oker, and black mixt; shadow with foot alone, or mixt with black,

and heighten with brown oker and white.

IV. A Woolf with brown-oker and foot, shadow

with more foot.

V. A gray Woolf with black, white, and brownoker, shaded with black and soot, or black only; the mouth with black and red-oker, shaded with black

and foot heightned with red-oker and white.

VI. The Elephant (which is of a Mouse gray) with black and white mixt with soot, and shaded with black and soot, and heightned with the same, with a little more white; the nose at the end of his trunk, inwardly must be laid with Vermilion and Ceruse, shadowed with black, or black mixt with Lake: in the same manner the inner part of the ears, the eyes with white tending to a grey.

VII. Mice are coloured as the Elephant: Rats a

little browner.

VIII. The Unicorn with a pure white, shaded with black: the chaps red, the eye and hoofs with a thin black.

IX. The Hart with brown-oker, shaded on the back with foot, which sweetly drive towards the belly, and shade over again with a stronger foot; the neck and belly with white, the mouth and ears a little reddish, the hoof black, the horns with soot, and shaded with foot mixt with black.

X. The Hind with the same colours as the Hart,

but thinner, and higher, not fo brown.

XI. The Coney with black and white, his belly all white, fweetned with black; and heightned with a ftronger white.

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XII. The Hare with brown-oker, his belly below a little whitish; shade it on the back with foot, and

heighten on the belly with white.

XIII. Apes, Monkeys and the like, with Pink and black, heightned with Masticot and white; the face lay with a thin black mixt with foot, shaded with black and Pink mixt with a little red-oker.

XIV. Cats if gray and brownish, or tabby, with Indico, blew and white, heightned with pure white. and shaded with Indian-blew and black mixt: In o-

ther colours use your discretion.

XV. The Ass with black mixt with white like grey; if the As be of a mingled brown, black and white mixt with brown-oker, shaded with black in the mouth; heighten with white.

XVI The Leopard with brown-oker andred-oker mixt with black, shadow it with foot, the spots with red-oker and black, the mouth with black and white:

heighten him with light oker.

XVII. Horses, Dogs, Oxen and such like, if white, with white mixt with a little foot, or oker, shaded with a black and white, and heightned with perfect white.

XVIII. If of a Cheftmut brown, with red-oker and black, shaded with black and soot, and heightned

with red oker and white.

XIX. If an Ash-grey, with black mixt with white, shaded with black, and heightned with white.

XX. If black, with a thin black, shaded with a stronger black, and heightned with black and white.

XXI. A bay Horse with Vermilion and brownoker; or only with red-chalk, shaded with red-oker, and heightned with red-chalk mixt with white.

XXII. If spotted, by mixture of the aforesaid colours, and discreetly putting every one in its proper apartment or place. CHAP.

# CHAP. XLVIII.

Of the Limning of Serpents-

I. THe Serpents on the back with Bice, and downwards towards the belly with a pale black, the back speckled with black; the belly shaded with red, sprinkled also with black specks.

II. The Adder with red-lead, Vermilion and Saffron, with blew in the back, and on the belly below Mafficot and white, speckled all over with black spots.

III. The Crocodile with a dark thin green, from the back down-wards to the belly; below the belly with Masticot, so that the yellow and green may melt, or vanish away into one another; shadow him with Indico and smalt, and heighten the belly with Masticot and white: the mouth before and within redish, the scales black, the claws of blackish green, the nails wholly black.

IV. The Frog with a fair green, speckled with black, and towards the belly with green mixt with Masticot, sweetned with green speckled: the eyes with Saffron, and black round them, the back height-

ned with Saffron.

# CHAP. XLIX.

Of Limning Waters and Fish.

I. W Ater at a distance with white and Indico, shaded with Indico mixt with Bice, and heightned with white: if near the Horizon much like the Sky.

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II. Waters near lay with stronger Indico, heighten and shadow with the same mixt with Bice: lastly heighten with pure white.

III. Waters nearer with stronger Indico, shaded

and heightned as before.

IV. Waters in fields overgrown, with Pink and

the like; always imitating Nature.

V. Fish in green Waters, with indico mixt with Ferench-berry-yellow, shaded with a thin Indian blew,

and heightned with pure white.

But Fishes ought also to be done according to their Nature and Colour, for some are yellow, some brown, some speckled, some grisled, some black, &cc. in all which to conferve in Figure the true Idea, you ought to take directions only by the life.

Libri Secundi F I N I S.

POLYGRA-

# POLYGRAPHICES

# LIBER TERTIUS.

Of Painting, Washing, Colouring, Dying, Varnishing, and Gilding.

Containing the Description and Use of all the chief Instruments and Materials, and the way and manner of Working.

The Dying of Cloath, Silks, Horns, Bones, Woods, Glass, stones, and Metals: Together with the Gilding and Varnishing thereof, according to any purpose or intent.

## CHAP. I.

Of Painting in General.

HE Art of Painting (which is the imitation of Nature) consists in three things, to wit, Defign, Proportion, and Colour: all which are exprest in three sorts of Painting, viz. Landskip, History, and Life.

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II. Landskip or Perspective, wonderfully respects freedom and liberty, to draw even what you please. History respects proportion and figure: Life respects colour: In each of which there is a necessary dependency of all the other.

III. The work of the Painter is to express the exact imitation of natural things; wherein you are to observe the excellencies and beauties of the piece,

but to refuse its vices.

For a piece of Painting may in some part want Diligence, Boldness, Subtilty, Grace, Magnificence, &C. while it is sufficiently in other parts excellent; and therefore you are not so much to imitate Ornaments, as to express the inward power and strength.

IV. In Imitation, always be fure to follow the examples and patterns of the best masters; lest evil pre-

cedents beget in you an evil habit.

V. The force of *Imitation* resides in the sancy or imagination, where we conceive (what we have teen) the form or *Idea* of that, or those things which we

would reprefent in lines and colours.

VI. This Fancy or Imagination is strengthened, by lodging therein all variety of visible rarities; as 1. Forms made by light and darkness; such as are to be seen in Summer in the clouds, near Sun-setting (which vanish before they can be imitated:) 2. Forms made by proximity or distance of place, such as are Trees, Woods, Buildings, appearing perfect being near, or consused in their parts being far off: 3. Forms of dreams, of which (whether sleeping or waking) the fancy must be fully posses.

VII. Where *Defign* is required; you must fancy every circumstance of the matter in hand, that in an instant, with a nimble hand, you may depict the same

with liveliness and grace.

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Slow performance causes a perturbation in the fancy, cooling of the mind, and destruction of that passion which should carry the work on: but quickness and diligence brings forth things even excellent indeed: Care, Industry and Exercise are the props, supporters and upholders of Art.

VIII. Be fure you dwell not too long upon defigning: alter not what is well, left for want of exquisite judgment you make it worfe: and if in defigning; you want that ability to follow the quickness of fancy, fubmit to a willing negligence; a careless operation adds fometimes fuch a fingular grace, as by too much curiofity would have been totally loft; then by reviewing what is done, make a regular connexion of all the Idea's conceived in your mind.

IX. With Apelles amend those things which others justly find fault with; the reprehensions of an Artist are as demonstrative rules of experience; and weigh every ones opinion for the advancement of Art.

X. Lastly, be sure your piece be of a good Design, History or Life; that the parts be well disposed, the Characters of Persons, proper; the Form magnificent, the colour lively, and the spirit bold: that it may appear to be the work of a nimble fancy, ready memory clear judgment, and large experience.

#### CHAP. II.

Of Painting in Oyl, and the Materials thereof.

I. DAinting in Oyl is nothing but the Work or Art of Limning performed with colours made up or mixed with Oyl. II. The

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II. The Materials of Painting are chiefly Seven, 1. The Easel. 2. The Pallet. 3. The Streining Frame.

4. The Primed Cloath. 5. Pencils. 6. The Stay

7. Colours.

III. The Eafel is a Frame made of wood (much like a Ladder) with fides flat, and full of holes, to put in two pins to fet your work upon higher or lower at pleasure; something broader at bottom than at the top: on the backfide whereof is a flay, by which you may set the Easel more upright or sloping.

IV. The Pallet is a thin piece of wood, (Pear-tree or Walnut) a foot long, and about ten inches broad, almost like an Egg, at the narrowest end of which is made an hole to put in the thumb of the left hand, near to which is cut a notch, that so you may hold the Pallet in your hand. Its use is to hold and temper the Colours upon.

V. The Streining Frame is made of wood, to which with nails is fastned the Primed Cloath, which is to be

Painted upon.

These ought to be of several sizes according to the bigness of the Cloath,

VI. The Primed Cloath is that which is to be Pain

ted upon: and is thus prepared.

Take good Canvas and smooth it over with a slick stone, size it over with size, and a little honey, and let it dry; then white it over once with whiting and size mixed with a little hony, so is the Cloath prepared, on which you may draw the Picture with a Coal; and lastly lay on the Co-cours.

Where note, honey keeps it from cracking, peeling or

lreaking out.

VII. Pencils are of all bignesses, from a pin to the bigness of a finger, called by several names, as Ducksquill stitched and pointed; Goose-quill stitched and pointed;

Swans-

Swins will fitched and pointed, Temelling pencils, and brifts pencils: forme in quills, some in Tin cases, and

some in sticks.

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VIII. The Stay or Molfick, is a Brazil flick (or the like) of a yard long; having at the one end thereof, a little ball of Cotten, fixed hard in a piece of Leather, of the bigness of a Chestnut; which when you are at work you must hold in your left hand; and laying the end which hath the Leather ball upon the cloath or Frame, you may rest your right arm upon it, whilst you are at work.

IX. The Colours are in number feven (ut fupra) to wir, White, Black, Red, Green, Yellow, Blew,

and Brown.

Of which some may be tempered on the Pallet at first, some must be ground, and then tempered; and other some must be burnt, ground, and lastly tempered.

X. To make the Size for the Primed cloath at the

fixth Section of this Chapter.

Take Glew, and boil it well in fair water, till it be dissolved, and it is done.

XI. To make the Whiting for the fixth Section of

this Chapter.

Take of the aforesaid Size, mix it with whiting ground, and so white your boards or cloath (being made smooth) dry them, and white them a second or third time; lastly, scrape them smooth, and draw it over with White-lead tempered with Oyl.

XII. To keep the Colours from skinning.

Oyl Colours (if not presently used) will have a skin grow over them, to prevent which put them into a glass, and put the glass three or four inches under water, so will they neither skin nor dry. 180

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off: if the pencils be foul, dip the ends of them in oyl of Turpentine, and squeeze them between your fingers, and they will be very clean,

# CHAP. III.

Of the Colours in General, and their fignifications.

THe chief whites for Painting in Oyl are, White-lead, Ceruse and Spodium.

II. The chief Blacks are Lamp-black, Seacoal-black, Ivory-black, Charcoal, and Earth of Colen-

III. The chief Reds are, Vermilion, Cinnaber Lake, Red-lead, Indian Red, Ornotto.

IV. The chief Greens are, Verdigrife, Terra-vert, Verditer.

V. The chief Tellows are, Pink, Masticot, English Oker, Spruce Oker, Orpiment.

The chief Blews are, Blew Bice, Indico, Ultramarine, Smalt.

VII. The chief Browns are Spanish-brown, burnt

Spruce, Umber. VIII. These Colours, Lamp-black, Verditer, Vermilion, Bice, Smalt, Masticot, Orpiment, Ultramarine, are not to be ground at all, but only tempered with oyl upon the Pallet.

IX. These Colours, Ivory, Ceruse, Oker and Um-

ber are to be burnt, and then ground with oyl. X. All the rest are to be ground upon the Grinding stone with Linseed oyl (except White-lead, when it is to be used for Linnen, which then is to be ground

with

with oyl of Walnuts, for Linfeed oyl will make it

turn yellow.

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And now fince we are engaged to treat of colours, it may neither be unnecessary, nor unuseful for the young Artist to know their natural significations; which take as followeth.

XI. Blem fignifieth truth, faith, and continued affections; Azure, Constancy; Violet, a religious mind.

XII. Orange tawny fignifies Pride, also integrity;

Tawny, forfaken; Limmon, jealousie.

youthfulness, and rejoycing: Sea-green, Inconstancy.
XIV. Red fignifies Justice, Vertue and Defence:

Flame-colon, Beauty and Deline: Maidens-blufth, Envy.

XV. Yellow fignifies Jealousie: perfect yellow, Joy, Honour, and greatness of Spirit: Gold-colour, Avarice.

XVI. Flesh-colour fignisheth Lasciviousness: Carnation, Crast, Subtilty and Deceit: Purple, Fortitude and Strength.

XVII. Willow-colour fignifieth forfaken: Popingjay-

green, Wantonness: Peach-colour, Love.

XVIII. White fignifieth Death: Milk-white, Innocency, Purity, Truth, Integrity: Black, Wildom, Sobriety, and Mourning.

XIX. Straw-colour fignificath Plenty: Ruft of Iron, Witheredness; Ermine Religion and Holiness.

XX. The White, Black, Red, and Green, are Colours held facred in the Church of Rome: White is worn in the Festivals of Virgins, Saints, Confessors and Angels, to show their innocency: Red in the Solemnities of the Apostles and Martyrs of Jesus: Black in Lent and other Fasting days: Green is worn between the Epiphany and Septnagesima: and between Pentceost and Advent.

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## CHAP. IV.

Of the fitting of Colours for Painting.

I. I Pon the Pallet dispose the several colours, at a convenient distance, that they may not intermix: first lay on the Vermilion, then the Lake, then the burnt Oker, then the Indian Red, Pink, Umber, Black and Smalt, each in their order, and lay the White next to your thumb, because it is offinest used, for with it all shadows are to be lightned; and next the White a stiff fort of Lake; thus is the Pallet surnished with single colours for a face.

· Now to temper them for shadowing various complexions

do thus.

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II. For a fair complexion.

Take White one dram, Vermilion, Lake, of each two drams, temper them, and lay them affide for the deepelt Carnation of the face: to part of the affirefaid mixture put a little more white, for a light Chanation; and to part of that put more white (which temper on the Pallet) for the lightest colour of the face.

III. The faint fladows for the fair Complexion.

Take Smalt, and a little white, for the eyes, to part of that add a little Pink, and temper by it felf for faint greenish shadows in the face.

IV. The deep shadows for the fame.

The Cinnaber Lake, Pink, and black of each, which temper together; if the fladows ought to be redder than what is tempered, add more sake; if pelower, add more Pink; if blewer or grayer, add more black: thus shall the Pallet be sitted with colours.

V. For a brown or fwarthy complexion.

The single colour being laid on the Pallet as before, and tempered; to the white, Lake and Vermilion, put a little burnt Oker for a Tawny; and for heightning add some Yellow Oker, so much as may just change the colours. The faint and deep shadows are the same at the third and fourth Section of this Chapter.

VI. For a Tawny complexion.

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The colours are the same with the former, but the shadows are different; which must be made of burnt Oker and Umber, (which will fit well:) if the shadow be not yellow enough, add a little Pink to it.

VII. For a black complexion.

The dark shadows are the same with the former: but for heightning take White, Black, Lake, and burnt Oker; in tempering of which put in the white by degrees, till you come to the lightest of all. Where note that the single colours at sirst laid upon the Pallet and tempered, serve for shadows for all complexions; and that all deepnings ought to be with black, Lake and Pink tempered together.

# CHAP. V.

Of Colours for Velvet.

I. FOR black Velvet. Take Lamp-black and Verdigrife for the first ground; that being dry, take Ivory-black, and Verdigrife, shadow it with White-lead mixt with Lamp-black.

II. For Green. Take Lamp-black and White-lead, and work it like a Russet Velvet, and let it dry; then draw it over with Verdigrise tempered with a little Pink.

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III. For

III. For Sea-green. Take only Verdigrife, and lay it over Russet: If a Grass-green, put a little Masticot to it; shadow these greens with Russet, which lay ac-

cording to the deepness of the green.

IV. For Red. Take Vermilion, and shadow it with Spanish-brown; and where you would have it darkest, shadow with Seacoal-black and Spanish-brown with the aforesaid colours, dry it, and then gloss it over with Lake.

V. For Crimson or Carnation. Take Vermilion, to

which add White-lead at pleasure.

VI. For Blew. Take Smalt tempered alone.

VII. For Tellow. Take Masticot and yellow Oker, and where you would have it darkest, shadow it with

Umber.

VIII. For Tawny. Take Spanish-brown, Whitelead, and Lamp-black, with a little Verdigrise, to shadow where need is: when dry, gloss it over with Lake and a little Red-lead.

IX. For hair colour. Take Umber ground alone; and where it finould be brightest, mix some White-lead about the folds, lighten or darken with White-

lead and Umber.

X. For Astronomy. Take Charcoal, black and White-lead; lighten with White-lead: a colour like to a dark Russet will be an Astronomy.

XI, For Purple. Take Smalt and Lake, of each alike, temper them (light or deep as you please) with

white-lead

XII. Lastly note, that in painting Velvet you must at first work it somewhat sad, and then give it a sudden brightness.

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# CHAP. VI.

Of Colours for Sattins.

I. FOR Black. Take Lamp-black ground with Oyl, and tempered with white-lead; and where you would have it shine most, mix Lake with the white-lead.

II. For Green. Take Verdigrise ground alone and mixed with white-lead; adding Pink where you would have it brightest: to the deepest shadows add

more Verdigrise.

III. For Tellow: Take Masticot, yellow Oker and Umber (ground each by themselves) where it should be brightest use Masticot alone; where a light shadow, use Oker, where darkest use Umber.

IV. For Purple. Take Smalt alone, and where it

should be brightest use white-lead.

V. For Red. Take Spanish-brown (ground alone) mix it with Vermilion, and where it should be brightest mix white-lead with the Vermilion.

VI. For White. Take White-lead (ground alone)

and Ivory-black, which temper light or dark.

VII. For blew. Temper Smalt and White-lead: where it should be saddest, use Smalt; where lightest, White-lead.

VIII. For Orange colour. Take Red-led and Lakes; where brightest, Red-lead, where saddest, Lake.

IX. For Hair Colour. Temper Umber and Whitelead; where it should be brightest, put more Whitelead, and where the greatest shadow, use Seacoal-black mixed with Umber.

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# CHAP. VII.

Of Colours for Taffaty, Cloth and Leather.

I Taffaties are Painted much as Sattins, thus: Take fuch colours as are fit for the purpose, and lay them one by another upon the work, and shadow them with others.

II. Cloth is the same work with Sattin, save, you must not give to Cloth so sudden a shining gloss.

III. Cloth of Gold is made of brown Oker and liquid Gold; water and heighten upon the fame with finall gold stroaks.

IV. For Buff, mix yellow Oker and White-lead; and where it should be dark by degrees, mix it with a little Umber; when you have done, fize it over with Umber and Seacoal-black.

V. For yellow Leather, take Masticot and yellow

Oker, shadow it with Umber.

VI. For black Leather, take Lamp-black, and shadow it with White-lead.

VII. For White Leather, take White-lead, and shadow it with Ivory-black.

## CHAP. VIII.

Of Colours for Garments in general.

I. For Black. Let the dead colour be Lamp-black and Verdigrise: being dry, go over with Ivory-black and Verdigrise; but before the second going over, heighten it with white.

II. For

II. For Hair Colour. Take Umber and White for the ground; Umber and black for the deeper shadows; Umber and English Oker for the meaner shadows; white and English Oker for heightening.

III. For Blew. Take Indico and White: first lay the White, then the Indico and White mixed; then deepen it with Indico, and when dry, glaze it with

Ultramarine which will never fade.

Smalt will turn black, and Bice will turn green.

IV. For Purple. Take Smalt tempered with Lake and White-lead, then heighten with White-lead.

V. For a fad Red Take Indian Red heightened with

White.

VI. For a light Red. Take Vermilion, glaze it over with Lake, and heighten it with White.

VII. Por a Searler, Take Vermilion and deepen it

with Lake, or Indian Red.

VIII. For Green: Take Bice and Pink, heighten it with Masticot, and deepen with Indico and Pink.

IX. For jellow. Take Mafticot, yellow Oker, Umber; lay Mafticot and white in the lightest places; Oker and White in the mean places, and Umber in

the darkest, glaze it with Pink.

X. For Orange Colour. Lay the lightest parts with Red-lead and white, the mean parts with Red-lead alone; the deeper parts with Lake, and if need is, heighten it with white.

XI: For a fad Green. Mix Indico with Pink: for a light Green mix Pink and Masticot: for a Grassesee

mix Verdigrise and Pink.

XII. Remember always to lay yellows, blews, reds and greens, upon a white ground, for that only giveth them life.

#### CHAP. IX.

Colours for Metals and precious Stones.

I. For R Iron. Take Lamp-black and White-lead; if you would have it rufty, take Seacoal-black, and mix it with a little white.

II. For Silver. Take Charcoal-black and Whitelead; where you would have it darkeft, use more Charcoal: work Silver somewhat rustish, and give it a sudden gloss with White-lead only.

III. For Gold. Take Lake, Umber, Red-lead, Maflicot; lay the ground with Red-lead, and a little dry Pink: where you would have it darkest, shadow it most with Umber, where lightest with Masticot

Note, in grinding Red-lead for the Gold size, put in a little Verdigrise to make it dry sooner.

IV. For Pearls. Temper Charcoal-black with white-lead, till it be a perfect ruflet; then make the Pearl with it, and give it a speck of White-lead only to make it shine.

Where note, that Coruse tempered with Oyl of white Poppy is excellent to heighten up Pearls.

V. For precious Stones. For Rubies, &c. lay their counterfeit grounds with transparent colours; and Lake, Verdigrise and Verditer give them a shining colour.

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#### CHAP. X.

Of Colours for Landskip.

I. For R a light Green, use Pink and Masticot heightned with white: for a sad Green, Indico and Pink

heightned with Masticot.

II. For fome Trees, take Lake, Umber and White, for others Charcoal and white, for others Umber, black and white, with some green; adding sometimes Lake or Vermilion, with other colours.

III. For Wood, take Lake, Umber and white, mix-

ing sometimes a little green withal.

IV. For Fire, lay Red-lead and Vermilion tempered together where it is reddest: where it is blew, lay oyl, Smalt, and white-lead: where it is yellow, take Masticot, and work it over in certain places; where you would have it shine most, with Vermilion.

V. For an Azure Skie, which seems a far off, take Oyl, Smalt, or Bice, and temper them with Linseed-oyl. But grind them not: for Smalt or Bice utterly lose

their colour in grinding.

VI. For a Red Skie, take Lake and white; and for Sun-beams, or yellow clouds at Sun-rising or setting, take Masticot and white.

VII. For a Night Skie, or clouds in a storm, take Indico deepned with black, and heightned with white.

VIII. For Wood Colones, they are compounded either of Umber and white, Charcoal and white, Seacoal and white, Umber black and white; or with some green added: to which you may adjoin sometimes, as in barks of Trees, a little Lake or Vermilion.

IX. Lastly for the practical performing of the work have recourse to the rules delivered in chap. 13. lib. I. and chap. 27. lib. II.

#### CHAP. XI.

Of the Painting of the Face.

I. Ave your necessary pencils in readiness, as two pencils ducks quill fitched; and two ducks quill pointed; two Goose quill fitched, and two pointed: two briftles both alike; one Swans quill fitched, and one pointed; one larger pencil in a Tin case fitched; and a briftle of the same Bigness, every one having a stick of about nine inches long put into the quill thereof, the farther end of which stick must be cut to a point.

II. The pencils in a readiness in your left hand, with the pallet upon your thumb, prepared with fit colours, and your molfiek to rest upon; you must work

according to the directions following.

III. The *cleth* being pinned, and strained upon the Frame, take a knife, and with the edge thereof scrape over the cloth, left knots or the like should trouble it.

IV. Then fet the Frame and cloth upon the Easel, at a convenient heighth, that fitting on a stool (even with the party you draw) you may have the face of the Picture equal, or something higher than your own: fet the Easel to the light (as in Limning we have taught) letting it come in upon your left hand, casting the light towards the right.

V. Let the Person to be drawn, fit before you in the posture he intends to be painted in, about two

yards distant from you.

VI. Then

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VI. Then with a piece of painted chalk draw the proportion of the face upon the cloth, with the place of the eyes, nofe, mouth, ears, hair, and other postures.

Here is no difficulty in this, if you miss much, the co-

lours will bring all to rights again.

VII. Then take a pencil, Swans quill pointed, and begin to paint fome of the lightest parts of the face with the lightest colour, (as the heightning of the fore-head, nose, cheek-bone of the lightest side:) the mean parts next (as the cheek-bone of the dark-side, chin, and over the upper lip:) proceeding gradually till you come to the reddest parts of all.

VIII. Lay faint greenish shadows in convenient places, and where it is necessary to soften harsher shadows, but take heed of putting green where red

should be.

IX. The faint or light parts thus done, take one of the Goose quill pointed, or Ducks quill stiched, and begin at the eyes to shadow with Lake, going over the nose, mouth, compass of the ear, &c. before you lay on any colour, wiping it lightly over with a limnen rag, to prevent the overcoming of the other colours.

X. The colours both light and dark being put in, take a great fitch pencil; and fweeten the colours therewith, by going over the shadows with a clean soft pencil, which being well handled will drive and intermix the colours one into another, that they will look as if they were all laid on at once, and not at divers times.

Where note that the bigger pencils you use, the sweeter

and better your work will lie.

XI. At the fecond fitting, begin again with clean pencils, of fuch bigness as the work requires, and observe well the person, and see what desects you find in your work at first sitting, and amend them; then heighten

heighten or deepen the shadows as occasion requires.

XII. Lastly, take a Goose quill bristle, and put in the hair about the face (if there must be any) and rub in the greater hair, with the greater bristle, heightning it up with the Goose quill pencil.

#### CHAP. XII

Of the cleanfing of any old Painting.

I. Take good wood-ashes, and searce them, or else some Smalt or powder-blew, and with a Spunge and fair water gently wash the Picture you would cleanse (taking great care of the shadows) which done, dry it very well with a clean cloth.

II. Then varnish it over again with some good varnish, but such as may be washed off again with water

if need be.

We shall hereafter shew the way of making varnish of

several sorts, mean season this following may serve.

III. Take either common varnish (made with Gum sandrack dissolved in Linseed-oyl by boiling) or glair of Eggs, and with your pencil go over the Picture once, twice, or more therewith as need requires.

#### CHAP. XIII.

Of a Picture in general.

I. In every Picture there are always four principal considerations: to wit, 1. Invention, 2. Proportion; 3. Colour: and 4. Life.

II. Inven-

II. Invention must be free, and flow from a general knowledge of Antiquities, History, Poetical Fictions, Geometrical conclusions, and Optical considerations, according to its Situation or Aspect, either near or far off.

III. And this Invention must express proper and fit things, agreeing to the Circumstances of Time, Place, Matter, and Person; and having respect to the modes of habits belonging to the Country or People whether

Antient or Modern

IV. Proportion, Analogy, or Symmetry (which you please) is that which limits each part to its proper bigness, in respect to the whole.

What soever differs from this recedes from beauty, and

may be called Deformity.

V. This Proportion is called by Artists the designing lines; which are first drawn before the whole is

painted.

These proportions or lineal designs, draughts, and scotches, may be called Picture, which being well done, shew not only the shape, but also the intent: In lines only, we may draw the proportion of a Black-Moor, and such as shall be like him: Now this skill proceeds from the very highest principles of Art.

VI. Colour is that which makes the Picture refemble what we defire to imitate; by mixing of various

colours together.

VII. In making any thing apparent, it is necessary

to express its opposite or contrary.

So light and shadows forward, set forth Paintings outwards, as if you might take hold of them with your hand: blackness makes things seem farther off, and is used in things hollow, as Caves, Wells, &c. the more deep the more black.

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VIII. Brightness exceeds light sparkling in splendor.

It is used in the Glory of Angels; twinkling of Gems,

Armory, Gold and Silver vellels, fires and flames.

IX. In Painting of a man, grace each limb with its proper and lively colour; the black make fincerely black; the white pure, with redness intermixt. But to paint purely the exquisite beauty of a woman, is never to be well done (except it be by a very ingenious Artist indeed) her rare complexion being scarcely possible to be imitated with colours: There is none really knows the exact mixture for such a Countenance.

X. Life or Motion is that from whence action or paffion doth refult, which in coloured Pictures is feen

with a lively force of Gesture and spirit.

To do this it is necessary that the Artist be well acquainted with the nature, manners, and behaviour of men and momen, as in anger, sadness, joy, earnestness, idleness, love, envy, fear, hope, despair, &c. Every disturbance of the mind alters the Countenance into several postures.

XI. The head cast down shews humility; cast back, arrogancy or scorn; hanging on the neck, languishing; stiff and sturdy, morosity of mind: the various postures of the head shew the passions; the Countenance the same; the eyes the like: and in a word, all the other parts of the body contribute something to the expression of the said passions of the mind, as is easily to be observed in the life.

In excellent pieces you may at a view read the mind of

the Artist in the formality of the Story.

XII. Laftly, Be alway fure first to conceive that in your thoughts, which you would express in your work; that your endeavours being affisted by an intellectual energy, or power of operation, may at length render your productions perfect.

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### CHAP. XIV.

Of the Choice of Coples, or Patterns.

If I E that chuseth a Pattern, ought to see i. that it be well co-

II In the well defigning, be fare that it be true in every part; and that the proportion of the figure be

iast and correspond to the life.

III. If the Picture be a fiction, fee that it be done boldly, not only to exceed the work (but also the possibility) of nature, as in Centaures, Satyrs, Syrens, Flying-horses, Sea horses, Tritons, Nereides, &c.

Alexander ab Alexandria saith that Theodore Gaza caught one of these Nercides in Greece, and that in Zealand, another mas taught to spin these Tritons and Nercides are those which are called Mare-maids, the Male and

the Female Coosed years

IV. Natural figures shew property, and are required to agree with the life! Forced figures express novelty, and are to be beautified by exorbitancies according to the fancy of the Painter without limitation novelty causes admiration, and admiration curiofity, a kind of delight and satisfaction to the mind.

These things are not the products of stupid brains, nor are they contained within the perimetre of clouded and dull

Conceptions .....

V. In the well colouring, know that in obscurity or darkness there is a kind of deepness; the fight being sweetly deceived gradatim in breaking the Colours, by insensible change from the more high to the more dull.

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In the Rain-bow this mixture is perfect; the variety of Colours are throughly dispersed (like Atoms in the Sunbeams) among one another, to create its suft appearance.

VI. See that the fwellings of the work agree with the exactness of nature, and as the parts thereof require, without sharpness in out-lines, or flatness within the body of the pieces as also that each hollowness exactly correspond in due proportions.

VII. Laftly, View precifely the passions, as for Surger, Large Harace From Hope, &c. and see that they correspond with their proper postures; for a touch of the pencil may strangely after a possion to signife opposite or contrary, as from Mirch to Mourning, \$34,016, and throwed become of the total of

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fibility ) of nature, as in Centamer, Sat

# Of the Disposing of Pattures and Printings.

I A Ntique works, or Groteleo, may become a wall, the borders and freezes of other works; but if there be any draughts in figures of men and women to the life upon the wall, they will be best of black and white, or of one colour heightened: if they be naked, let them be as large as the place will afford; if of Manbles, Columns, Aque duess, Arches, Ruines, Cararacis, let them be bold, high, and of large proportion.

II. Let the best pieces, be placed to be seen with fingle lights, for so the shadows fall natural, being always fitted to answer one light; and the more under or below the light, the better, especially in mens faces, and large pieces.

III. Let the Porch or entrance into the house, be set out with Reflick figures, and things rural.

IV. Let

IV. Let the Hall be adorned with Shepherds, Peafants, Milk-maids, Neat-herds, Flocks of Sheep and the like, in their respective places and proper accen-

dants, as also Fowls, Fish, and the like.

V. Let the Swir-case be set off with some admirable monument or building, either new or rumous, to be feen and observed at a view passing up: and let the Ceiling over the top-stair be put with figures foreshortned looking downwards out of Clouds, with Garlands and Cornucopia's.

VI. Let Lundskips, Hunting, Filling, Powling, Histories and Antiquities be put in the Great Chamber.

VII. In the Dining room let be placed the Pictures of the King and Queen; or their Coat of Arms; forbearing to put any other Pictures of the life, as not being worthy to be their companions; unless at the lower end, two or three of the chief Nobility, as attendants of their Royal Persons: for want hereof you may put in place, some few of the nearest blood.

VIII. In the inward or with-drawing Chambers, put other draughts of the life, of Persons of Honour, intimate or special friends, and acquaintance, or of Ar-

tifts only.

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IX. In Banqueting-rooms, put cheerful and merry Paintings, as of Bacchus, Centaures, Satyrs, Syrens, and the like, but forbearing all obscene Pictures.

X. Histories, grave Stories, and the best works become Galleries; where any one may walk, and exercife their fenses, in viewing, examining, delighting, judging and cenfuring.

XI. In Summer-houses and Stone-walks, put Castles, Churches or fome fair building: In Tarraces, put Boscage, and wild works. Upon Chimney-pieces, put

only Landskips, for they chiefly adorn.

XII. And in the Bed-chamber, put your own, your Wives and Childrens Pictures; as only becoming the most private Room, and your Modesty: lest (if your Wife be a beauty) some wanton and libidinous guest should gaze too long on them, and commend the work for her sake.

XIII. In hanging of your pictures; if they hang high above reach, let them bend somewhat forward at the top; because otherwise it is observed that the visual beams of the Eye, extending to the top of the Picture, appear further off, than those at the foot.

#### CHAP. XVI.

Of Frescoe, or Painting of Walls.

I N Painting upon Walls, to make it endure the weather, you must grind your colours with Lime water, Milk, or Whey, mixt in fize colour in pots.

II. The paste or plaister must be made of well wash'd Lime, mixt with fine powder of old rubbish stones: the Lime must be so often wash'd, till all its Salt is abstracted; and all your work must be done in clear and dry weather.

III. To make the work endure, strike into the wall stumps of headed nails, about five or six inches asunder, and by this means you may preserve the plaister from peeling.

IV. Then with this pafte, plaifter the wall, a pretty thickness, letting it dry: being dry, plaifter it over again about the thickness of half a Barley corn, very fine and smooth, then your colours being ready prepared work this last plaistering over, whilest it is wet, so will your Painting unite and joyn fast to the plaister, and dry together as a perfect compost.

V. In

V. In Painting be nimble and free, let your work be bold and strong, but be sure to be exact, for there can be no alteration after the first painting; and therefore heighten your paint enough at first, you may deepen at pleasure.

VI. All earthy colours are best, as the Okers, Spanish-white, Spanish-brown, Terræ-vert, and the like:

mineral colours are naught.

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VII. Lastly, let your pencils and brushes be long and soft, otherwise your work will not be smooth; let your colours be full, and slow freely from the pencil or brush; and let your design be perfect at first, for in this, there is no after alteration to be made.

#### CHAP. XVII.

Of Colours for Painting Glass.

I. Y Ellow. Take a very thin piece of pure fine Silver, and dip it into melted Brimstone; take it out with a pair of plyers, and light it in the fire, holding it till it leaves burning; then beat it to powder in a brasen Mortar; then grind it with Gum-Arabick water, and a little yellow Oker.

II. Tellow. Take fine Silver one Drachm, Antimony in powder two Drachms, put them in a hot fire, in a Crucible for half an hour, and then cast it into a Brass mortar, and beat it into powder, to which add yellow Oker six Drachms, old earth of rusty Iron se-

ven Drachms, grind all well together.

This is fairer than the former.

III. White. This is the colour of the glass it felf: you may diaper upon it with other glass or Crystal ground to powder.

O 4 IV. Black.

IV. Black. Take I et and Scales of Iron, and with a wet feather take up the Scales that fly from the Iron, after the Smith hath taken his heat, grind them with Gum-water.

V. Black. Take Iron scales, Copper scales, of each one Drachm, heat them red hot in a clean fire shovel; then take Jet half a Drachm, first grind them small,

and temper them with Gum-water.

VI Red. Take Sanguis Draconis in powder, put to it rectified fpirit of Wine; cover it close a little while, and it will grow tender; wring it out into a pot, that the drois may remain in the cloth; the clear preferve for use. This is a fair red.

VII. Carnation. Take Tin-Glass one ounce, Jet three ounces, Red-oker five ounces, gum two drachms.

grind them together. It is a fair Carnation.

VIII. Carnation: Take Jet four drachms, Tin-glass or Litharge of Silver two drachms; gum and scales of Iron of each one drachm, red chalk one ounce, grind them.

IX. Green. Take Verdigrise and grind it well with Turpentine, and put it into a pot; warming it at the

fire when you use it.

X. Blew. Provide the clearest Lead you can get of that colour, beat them to powder in a brazen mortar, take Goldsmiths Amel of the same colour, clear and transparent, grind each by it self, take two parts of Lead, and one of Amel, grind them together as you did the Silver. The same understand of Red and Green.

#### C H A P. XVIII.

# Of the way of Painting upon Glass,

L. Here are two manner of ways of painting upon glass, the one is for oyl colour, the other for fuch colours as are afterwards to be annealed or burnt on.

II. To lay oyl colours upon glass, you must first grind them with gum-water once, and afterwards temper it with Spanish Turpentine, lay it on and let it

dry by the fire, and it is finished.

III. To anneal or burn your glass, to make the colours abide, you must make a four square brick Furnace, eighteen inches broad and deep; lay five or fix cross Iron bars on the top of it, and raise the Furnace eighteen inches above the bars: then laying a place of Iron over the bars, fift (through a fieve) a lay of flack'd Lime over the place, upon which lay a row of glass, upon that a bed of Lime, and upon that Lime, another row of glass; thus continue fration Super Stratum, till the Furnace is full.

IV. Lay also with every bed of glass a piece of glass, which you may wipe over with any colour (these are called watches) and when you think your glass is burnt enough, with a pair of plyers take out the first and lowest watch, and lay it on a board, and being cold, try if you can scrape off the colour, if it hold fast on, take out that row; always letting it abide the fire, till the colour will not scrape off.

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#### CHAP. XIX.

# Of Washing, and the Materials thereof.

I. BY washing here we intend nothing else, but either to set our Maps or Printed Pictures in

proper Colours, or else to varnish them.

II. The Instruments and Materials of washing are chiefly fix: to wit, 1. Alum-water. 2. Size, or Gumwater. 3. Liquid Gold. 4. Pencils. 5. Colours. 6. Varnish. III. To make Alum-water. Take Alom eight ounces.

fair water a quart, boil them till the Alom is diffol-

ved.

Or thus, Take Spring or Well-warer, a Gallon: Roch Alum a pound, beat it to powder, and diffolve it in the water by boyling: filter it through a brown paper, and keep it for use. With this water, if you wet your paper before you lay on your colours, it will keep them from finking in, and withall, add a Lustre and Beauty to the colours laid on. But this you must note, that if your paper is not good, you must wash it over four or five times, which may be done with a large Pencil brush. Moreover, Alum generally raiseth staining colours, and preserves them from fading.

IV. To make Size. Take glew, which steep all night in water, then melt it over the fire, to see that it be neither too strong nor too weak: then let a little of it cool; if it be too stiff when it is cold, put more water so it, if too weak more glew, using it luke warm.

V. To make Gum-water.

Take pure Spring water a quart, put it into a Jar glass; and hang therein a sufficient quantity of pure white

white and clear Gum-Arabick, bruifed and tyed up in a rag: let it hang till the Gum is all dissolved. Then put your fingers into the water, and if you find them to flick together as if they were glewed. your water is too stiff, or full of the Gum, which you must remedy by putting thereto more fair water; and if you find it too weak, you may help it by adding more Gum. With this water, or the former fize, most colours are to be tempered, and with so much of the faid Gum-water, which being toucht when dry, the colour will not come off: where note. that if the colour glifter, there is too much Gum in it.

VI. Liquid Gold. It is exactly made by the first Section of the 21 Chapter of the second Book.

VII. Pencils are to be of all forts both fitch'd and pointed, as also a large pencil brush to paste Maps upon Cloth; another to wet the paper with Alom water; a third to ffarch the face of the Picture withal before it be coloured: and a fourth to varnish withal.

VIII. The colours are the same with those which we mentioned in Chap. 17. lib. 2. to which add, 1. Of Black, Printers black, Frank-ford black. 2. Of Red, Vermilion, Rosset. 3. Of Blew, Verditure, Litmose Flory. 4. Of Yellow, Cambogia, Yellow-berries, Orpiment. 5. Of Red Brazil, Logwood (ground) and

Turnsole, Cochenele, Madder.

IX. But by reason all those colours are not of use for staining or washing of Maps, Pictures, Globes, &c. Artists have selected out the most proper which are as follows. 1. Red, Brafil, Turnfole, Indian Lake, Cochenele, Indian Cakes, Roffet, Cinnabar, Vermilion, Red-lead. 2. Tellows, Aloes, Cambogia, Yellow-berries, Saffron, Masticot, Orpiment. 3. Blews, Litmose, Logwood, Indido, Verditer, Blew Bice, Smalt,

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Smalt, Uleramatine & Green, Verdigtife, Sapgreen, Verdiger, Green Bice. 5. White, Flake White, Spanish White. 6. Brown, Wood-foot, Rinds of Green Walnuts, Walnuturee Leaves, Spanish Brown, Umber, Iron Ruft. 7. Black, common Ink, Printers Black, Lamp-black, Ivory Black, Hardhorn Black.

X. Of these Colours, 1. Some are to be burnt, as Spanish Brown, Umber, Printers Black, Lamp-black, Ivory Black-Hartshorn Black, which are afterwards to be ground. 2. Some are to be ground, as Vermilion, Cinnabar, Indian Lake, Indico, White-lead, Spanish White, Masticot. 3. Some are to be mashed, as, Rossen, Red-lead, Bice, Verditer, Orpinient, Spanish Brown. 4. Some are to be steeped, as, Aloes, Cambogia, Yellow-berries, Sap-Green, Verdigrife, Indian Cakes, Saffron, Wood-soot. 5. Some are to be boyled, as, Brasil, Logwood, Turnsole, Green Walnut Rinds, Wood-soot. How these Operations are to be performed we have taught at large in lib. 2. cap. 22. sect. 5, 6, 7. and 11. to which I refer you.

#### CHAP. XX.

Of Colours simple for Washing of Maps, &c.

L A Loes, Let it be diffolved in a weak Gum water; it makes a deep or fad kind of Yellow Colour, according to the goodness of the Aloes.

II. Brazil. To some ground Brazil put small Beer and Vinegar, of each a sufficient quantity, let it boyl gently a good while, then put therein Alum in pouder to heighten the colour, and some Gum-Arabick to bind it; boyl it till it taste strong on the tongue.

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Chap. 20. Colours simple for Washing.

205

and make a good red, Pink colour, or light Violet.

III. Logwood. Ground Logwood boiled as Brazil,
makes a very fair transparent Violet or Purple Co-

lour.

IV. Cochenele. Steeped as Brazil was boiled, makes a fair transparent purple: as thus, take Cochenele, and put it into the strongest Sopelees to steep, and it will be a fair purple, which you may lighten or deepen at pleasure. Infisited in strong Vinegar, it makes a transparent purple.

V. Madder. Take madder four drachms, ground Brazil one ounce, Rain-water a quart; boil away a third part; then add Alom half an ounce boil it to a pinn, then Gum Arabick one ounce, which boil till it is diffolved, cool it forming it often, and strain it for

ufe. It is a good Scarler die for Leather.

VI. Verdisrife: Take Verdigrife ground finely one ounce; pureto it a good quantity of common varnifly, and so much oyl of Turpentine, as will make it thin, enough to work withal, it is a good green. Fine Verdigrife, diffolved in Rhenish wine or Vinegar, makes a maniparent Green in thining to ble w. Ground with inice of Rue and Gum-water, it is a pure Green; without the juice, it makes a glorious emerald, mixt with Crystals of Tartar in white wine Vinegar, in which Gum Arabiek has been distolved, makes a pure Green And Verdigrife, Alum, of each one drachm, Logwood three drachms, boiled in Vinegar, make a good Murry.

and it will make a beautiful and transparent yellow; if you would have it fronger, diffolive forme Alum therein it is good for Silk, Linnen, whire Leather, Parchment, Vellom, Paper, Quills, &c. This colour

delights in no mixtures.

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VIII. To make Verdigrise and Ceruse, according to

Glauber.

These colours are made with Vinegar in earthen pots fet into hot horse dung: but if you dissolve your. Venus or Saturn with spirit of Nitre, and precipitate your Venus with a lye made of Salt of Tartar, and your Saturn with Salt water, edulcorating and drying them; the Venus will yield an excellent Verdigrise, which will nor corrode other colours as the common Verdigrise doth; and the Saturn yields a Ceruse whitef and purer than the ordinary much better. for Painting or Chirurgery,

IX. Tellow Fustick-berry. Boil it in water or steep them in Alum water, it makes a good and transpa-

rent yellow for the fame purpofe.

X. Tarnsole. Put it into a tharp Vinegar over a gentle fire till the Vinegar boil, and is coloured; then take out the Türnfole and squeeze it into the Vinegar, in which dissolve a little Gum-Arabick; it shadows very well on a Carnation or yellow.

XI. Litmofe. Cut it into small pieces, and steep it a day or two in weak Gum Lake water, and you. will have a pure transparent blew water to wash

with.

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XII. Flory Blew. Grind it with glair of Eggs, if then you add a little Rollet it makes a light Violet blew; mixed with White and Red-lead, it makes a

Crane-feather colour.

I ogwood three drachms XIII. Saffron. Steeped in Vinegar and mixed with gum-water is a good yellow. In White wine or Sack, it makes also a good yellow; but more glorious if you mixt it with equal parts of Cochenele you may also steep it in glair of Eggs; or grind it with Ver-Parchinent, Vellom, Paper, Coil milion.

national mixtures. XIV. Indian XIV. Indian-Lake. Ground with Gum-Arabick water, makes a glorious Murry; in grinding it, add a little Sugar-candy: fome fay it makes a deep Pink or Bloom colour.

XV. Vermilion. Being ground with glair of Eggs and Honey or Gum-water, it makes a deep Red, or Scar-

let colour.

XVI. Red-lead. Grind it with a stiff Gum-lake water; if you add Saffron, it makes it Orient, and of a Marigold colour; of it self it is between a Red, and an

Orange colour.

XVII. Roffet. Washed and tempered with Gumwater, differs not much in colour from Indian-Lake; but it will soon fade and grow lighter; but being tempered with Brasil-water, 'twill be more deep.

XVIII. Indian-Cakes. Use them as ye do Turnsole (at Sett. 10. above) they make a good transparent Red colour: into the liquor put some Gum to bind

it.

XIX. Masticote. Ground and tempered with Gum-water, makes a good yellow, but not transparent.

XX. Orpiment. Washed and coloured with Gumwater, makes an Orient or Gold colour: there are several degrees of it, some more red, others more yellow.

XXI. Verditer. Washed and tempered with Gumwater, is a good blew, but not transparent, or in-

clining to a Green.

XXII. Indico. Ground and tempered with Gumwater, makes a deep blew, and is fit to shadow all o-

ther blews.

XXIII. Blew Bice. Washed and tempered with Gum-water, it is an excellent blew: there are several forts of it, some lighter, some sadder. Blew Bice,

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Bice, Verditure, and smalt, ground singly with Gumwater (or together) make a good blew.

XXIV. Smalt. Ground with a little fine Roffet,

makes a deep Violet.

XXV. Ultramarine. If you would have it deep, grind it with Litmofe water; it is the best and dearest of all blews.

XXVI. Sap-Green. Steep it in sharp Vinegar all night, to which add a little Alum to raise its colour. In Alum water it makes a good green to shadow with.

XXVII. Green Rice. Washed and tempered with Gum-water, makes a good, but no transparent Green, XXVIII. Lamp black or Printers black. Burnt.ground.

and tempered with Gum-water, make a good black.

XXIX. Ivory black. Burnt, ground and tempered with Gum-water, as the former makes also a good black.

XXX. Flake-Lead. Ground and tempered with Gum-

water, is an excellent white.

XXXI. Spanish White. Ground and tempered in like manner with Gum-water, makes the best of all whites.

XXXII. Spanish Brown. Burnt, ground, and tempered with Gum-water, makes a Redish brown, or

Liver colour.

XXXIII. Umber. Burnt and ground, and tempered with Gum-water, makes a good haw colour; and is

very good to shadow with upon Gold.

XXXIV. Green of Wallnuts. Boiled in water and strained, and Gum-Arabick dissolved in the liquor to bind it, makes an excellent colour to express Highways, Lanes, &c.

XXXV. Wood Soor. Prepared in all respects as the former, serves to the same intentions; and is much the better colour.

XXXVI. Native Cinnabar Grind it as Red-Lead. it is a glorious Red colour; much exceeding the Ar offen it; Then add Indico in the powder one clicini

mix them, and digelt it in hothedaing for th

# Since Share SH A P. XXI

Of Compounded Colours for Washing of Maps, &c.

Range Colour. Red lead and Yellow berries make a good Orange colour: thus take Ar notto half an ounce, Pot ashes one Drachm, water one pound, bod it half aways then firain it, and die little ground Vermilion; grind them togethetoddi

It is good for White Leather, Paper, Vollom, Quilles. Purchment, 8001 10 92411 9 21

II. Green Take diftilled vinegat, filings of Copper digest till the vinegar is blew, which let stand in the Sun or a flow fire till it is thick enough, and it will be s water: Verdience and freeze a spare

Or thus, Take Cedar-green ( which is best of all ) on instead thereof green Bice, freep it in Vinepar, and Strainit; then grind it well with fair water, Vand put to it a little honey, and dry it well; when you use it, mic it with Gamen XI. Brown, Cerufe, Red load water.

Pink, make a good brown. .oilon Indian ..

Take the bloffoms of Worde three ounces, Amylum one ounce, grind them with Urine and Strong Vinegar, of which make a Cake, then dry it in the Sun, and to keep it for ule, a builded, buildig and your

A Blew of wash upon paper of 10 . a sig flan usb of 1

Take of the best Azure an ounce, Kermes two ounces.

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ounces, mix them, which temper with clear gum-water, and it will be a glorious colour.

V. To make a Venice Blew.

210

Take quick Lime make it into paste with strong Vinegar, half an hour after put thereto more Vinegar to foften it; then add Indico in fine powder one ounce, mix them, and digest it in horse-dung for thirty or forty days.

VI. Another excellent Blew.

Mix fine white Chalk with juice of Elder-berries full ripes to which put a little Alum-water.

VII. To make blew Smalt.

Take fluxible fand, Sal-Nitre and Cobalt, mix them together, 190 00 and

VIII. A lively Yallow.

Diffolve Orpiment in gum-water, to which put a little ground Vermilion; grind them together and you shall have a very lively colour.

IX. A light Green. Take juyce of Rue, Verdegrife, and Saffron, grind them well together and ule

them with gum-water

Or thus, Take Sap-green, Flower-de-luce, or Tarry green, which steep in water: Verditure and Geruse mixt mith a little Copper green, make a good light colour.

Win Blem Ultramarine, blew-Bice, Smalt, and Verdi ture, ground fingly with gum-water, or together, make a good blew.

XI. Brown. Ceruse, Red-lead, English Oker, and

Pink, make a good brown.

XII. Spanish-brown. To colour any Horse, Dog, or the like, you must not calcine it; (yet not calcined it is a dirty colour :) but to shadow Vermilion, or lay upon any dark ground, behind a picture, to shade berries in the darkest places, or to colour wooden posts, wainscot, bodies of Trees and the like, it is very good (being XIII. Fielb burnt.

XIII. Flosh Colour. Mix white, Indian Lake, and Red-lead (according as you would have it light or deep, ) and to diftinguish a mans flesh from a womans, mingle with it a little Oker.

XIV. Colours of Scones. Verdegrife with Varnish makes an Emerald: with Florence Lake a Ruby 5 with

Ultramarine a Saphire.

XV. A never fading Green.

Take juice of flowers of Flower-de-luce, put it into Gum-water and dry it in the Sun.

#### CHAP. XXII.

Of mixing Colours and Shadowing.

I. In mixing be careful not to make the colour too fad, nor take the pencils out of one colour and

put them into another.

II. In mixing colours, fir them well about the water feverally till they are well mixed; then put them together, making the colour fadder or lighter at pleafure.

III. Green is shadowed with Indico and yellow-

berries.

IV. Blew is shadowed with Indico, Litmose and Flory; or any of them being steeped in Lees of Sope-

afhes, and used with gum-water.

V. Garments are shadowed with their own proper colours: or you may mingle the colour with white (for the light) and shadow it with the same colour unmingled: or you may take the thinnest of the colour for the light, and shadow with the thickest or bottom of the same.

VI. Sap green is only used to shadow other greens
P 2 with

with and not to be laid for a ground in any Garment.

VII. Lake ought not to be shaded with any colour. for it is a dark red; but for variety you may shadow it with Bice, or blew Verditure, which will make it like changeable Taffata.

VIII. The shadow for Yellow-berries is Umber : but for beauties fake with Red-lead, and the darkest touches with Spanish-brown; and for variety with Copper green, blew Bice or Verditure.

IX. White lets off blews and blacks very well: Red fets off well with yellow: Tellows with reds, fad blews, browns, greens, and purples.

X. Blews fet off well with rellows, reds, whites, browns, and blacks: and Green fets off well with purples, and

reds.

XI. More especially, all light colours are shadowed with colours of the fame nature, but more fad; as for Example: Vermilion is shadowed with Lake or Spanish brown. Verditer and Bice are shadowed with Indico. Camboge and yellow berries are shadowed with Umber, with Red-lead or Vermilion. Red-Lead is shadowed with Lake or Spanish brown. Masticote, is shadowed with Red Orpiment. Spanish brown is shadowed with burnt Umber, with Brasilwater. Umber is shadowed with Umber burnt, Roffet & Brasil are shadowed with Spanish brown mixed with brafil-water. Verdegrise is shadowed with Indico mixed with yellow-berry water. Wood Soot and Wallnut-shells are shadowed with Umber.

XXII. From the various mixtures of the foremention'd Colours, infinite varieties almost may arise, even whatfoever one pleafes: But for our purpose of washing Maps, Globes, Pictures, Landskips & c. the most transparent colours are principal; of which these are chief, viz. Brafil, Logwood, Indian cakes, Turnsole, Cambogia, Saffron,

rellow

green Walnut shells: of these you may by mixture make severall compounds, as

XIII. A Compound Green. Mix verdigrise water with yellow-berry water: it will be transparent, and you may make it deeper or lighter according to

the proportion that you take of either.

XIV. A Compound blew colour. Mix Litmose water with yellow-berry water, and you will have a transparent sad blew, which you may heighten or deepen as

the former at pleasure.

XV. A Compound Orange Colour. It is made by mixing Brasil water with yellow-berry water of a transparent colour. Infinite other Varieties you may find out by practice, much better than to learn them by many words. See other examples of staining colours in Chap. XXXIV. Sect. 19, 20, 21, 22, 23 and 24. following in this Book, and some other preceding Sections of the same Chapter.

#### CHAP. XXIII

# Of Colours for mashing Landskips.

I. Reen mixed with white, Pink, Bice Massicot, Smalt, Indico, or Ceruse; or blew Verditure mixt with a few yellow berries makes a

good green for Landskips.

II. For the faddest hills use Umber burnt; for the tightest places, put yellow to the burnt Umber: for other hills lay Copper green thickened on the fire, or in the Sun: for the next hills farther off mix yellow berries with Copper green: let the fourth part be some with green Verditure; and the furthest and fain-

rest places with blew Bice, or blew Verditure mingled with white, and shadowed with blew Verditure, in

the shadows indifferent thick.

III. Let the high-mays be done with red and white Lead, and for variety Yellow-oker; shadow it with burnt Umber, which you may use for fandy Rocks and Hills.

IV. Rocks may be done with feveral colours, in fome places black and white, in other places red and white, and in others blew and white, and the like as

you fee convenient.

V. The major must be black Verditure and white, shadowed with green and blew Verditure, when the banks cast a green shadow upon the water, and the water is dark shadowed then shade it with Indico.

green thickned, and blew Verditure

VI. Colour buildings with as much variety of pleafant colours as may be imaginable, yet let reason be your rule in mixing your colours: you may sometimes use white and black for the Wall, Conduits or other things: for Brick-bouses and the like, redlead and white: if many bouses stand together, set them off with variety of colours, as Umber and white; Lake and white; Red-lead and white, and the like.

VII. Lastly, for the Skie, use Masticot or yellowberries, and white for the tonest and lightest places; red Rosset and white for the next degree; blew Bice and white for the other; blew Bice, or blew Verditure

for the highest.

These degrees and colours must be so wrought together, that the edge of each colour may not receive any sharpness; that is, so as that you cannot perceive where you began to lay them, being so drowned one in another.

CHAP

#### CHAP. XXIV.

#### Of the Practice of Washing.

I. WIth the Alam water wet over the pictures to be coloured, for that keeps the colours from finking into the paper, & will add a luftre unto them, make them shew fairer, and keep them from fading.

II. Then let the paper dry of it self (being washed with Alum-water) before you lay on the colours; or before you wet it again, for some paper will need

wetting four or five times.

III. The washing of the paper with the Alemmater must be done with a large pencil brush, such as we have advised to at the fixth Section of the nineteenth

Chapter of this Book.

IV. But if you intend to varnish your pictures after you have coloured them; instead of washing them with Alum-water, first size them with new size made of good white starch, with a very fine brush; and this you must be sure to do all over, for else the varnish will sink through.

V. Having thus prepared your work, go to laying on your colours according to the former directions, fuiting them, as near as may be, to the life of every thing.

But before you lay on your Colours, you must know how to temper them; which you may do in this manner. I. Such colours as are ground with sair water? take a small quantity of them, put it into a Horse Musclesshell, putting thereto some Gum-water, and the Colour in a little time will be softned: then with your singer being very clean bruise the Colour against the shell till you sind no knot undissolved after with a clean pencil stroak down the colour

to the bottom of the shell, and it is sit for use; if it be too thick, add more gum-water to it. 2. Such colours as are washed you must temper in a shell with Gum-water in the same manner as the former. 3. such Colours as are steeped, the liquor only of them is to be used without any other preparation.

VI. The Picture being painted, you may with fize (as at the fourth Section of the nineteenth Chapter of this Book) paste your Maps or pictures upon cloth, thus: wet the sheet of cloth therein, wring it out, and strain it upon a Frame, or nail it upon a wall or board, and so paste your Maps or pictures thereon.

VII. Lastly, if the Picture be to be varnished, having thus fixed it into its proper Frame, then varnish it with a proper varnish (by the following rules) and

the work will be fully finished.

How to lay on your Colours.

VIII. First, provide your self of pencils of several sizes, and if you will be curious you ought to have a great and a small to each respective colour: if not you must always have by you a dish of fair Water, in which you must wash and cleanse your pencil, wiping it with a clean sinner cloth, before

you put it into another Colour.

IX. For your pencils, chuse those that are good, thus: see that they be fullest next to the quill, descending or lessening into a small room and sharp point, which you may see by putting the hair into your mouth, and drawing it through your lips once or twice; then you will see what it is, and if you find any extravagant hairs, sindge them off by a Candles slame.

X. Being thus provided with Colours and pencils; if you defign to lay any colour about the edges any Map, Part, Piece, or division of Ground, in a

Chap. 24. The Practice of washing, &c. 217

Plat; as suppose you would inclose a particular Field or Close in a Mannor, with yellow: with your pencil take Camboge or yellow-berry water a very small quantity, and on the inside of the black-lead line, draw the Colour along of an equal breadth (as near as you can) from the line, broader or narrower as your field is in bigness; not daubing the field or close all over with the Colour, which would he but an

abuse to your Map or Plat.

XI. Then having gone round the Close or Field in this manner, with your Colour, wet your Pencil in your mouth, or have by you a small quantity of water to dip it in, and strike along the inside of the coloured line, bringing it more down towards the center of the field: and this will sweeten your Colour, and make it shew as if it lost it self by degrees, to the very colour of your paper or parchment. This course is to be taken not only for yellows, but for all other colours. Lastly, with a pen (if you cannot do it handsomly with a pencil,) take some of the colour which shadows the colour you have already used about the field, and go over your black-lead line only, so shall your field be finished.

XII. Lasts, after the same manner you may adorn all the field in your Plat or Map, of divers colours; observing this, that you colour not two fields adjoyning one to another both of the same colour, but of different; and therefore it behoves you to know what colours do set off one another best; and as near as you can, to lay Closes or Fields, adjoyning one to another, of two such colours, that one snadow may

ferve both.

of the Stiver, The

#### CHAP. XXV.

Of the making of Varnishes.

I. T Arnish for Painting in Oyl.

Take Mastick two ounces, oyl of Turpentine, one ounce; put the Mastick in powder into the oyl, and melt it over the fire, letting it boyl little or nothing (lest it be clammy;) when it is enough, you may know by putting in a hens feather, for then it will burn it.

II. Varnish for painted Pictures.

Take white Rozin one pound, Plum-tree Gum (or Gum-Arabick) Venice Turpentine, Linfeed-oyl, of each two ounces; first melt the Rozin and strain it very hot; steep the Gum in oyl Olive (oyl of Ben is better) till it is dissolved, and strain it, to which put the Turpentine and Rozin, and over a flow fire mingle them till they are well dissolved. When you use it, use it hot.

III. Another for the fame.

Take Olibanum and Gum-Sandrack in powder, which mingle with Venice Turpentine, melting and incorporating them still over a gentle fire, then strain it hot.

When you use it, let it be hot, and your Varnish will shine well; it dries immediately.

IV. Another for the same.

Take oyl of Linseed, which distill in a glass Retort, one ounce, fair Amber dissolved three ounces, mix them over a slow Fire, and it is done.

V. A very good Varnish for Gold, Silver, Brass, Iron,

Stone, Wood, Vellom, or Paper.

Take

Take Benjamin (made into a fine powder between two papers) put it into a vial, and cover it with Spirit of Wine four fingers above it, and let it stand three or four days; then strain it, and it will be bright and shining, drying immediately, and retaining its brightness many years.

If you varnish Gold, or any thing gilded, before the fraining you should put in a few blades of Saffron for cotour sake: but if Silver or any thing white, you ought to

we the white part of the Benjamin only.

VI. A Varnish particularly for Gold, Silver, Tin, or

Copper.

Take Linfeed oyl fix ounces, Mastick, Aloes Epatick of each one ounce; put the guins in powder into the oyl, into a glazed earthen pot, which cover with another, luting them together, in the bottom of which let be a hole, whereinto put a small stick with a broadend to stir withal; cover them all over with clay, (except the hole,) set it over the fire, and stir it as often as it seetheth for a little while, then strain it for use. First let the metal be polished, then strike it over with this varnish.

VII. A Varnish for Wood and Leather.

Take Tincture of Saffron or Turmerick in Spirit of Wine a pint, prepared Gum-lake a sufficient quantity, dissolve the Gum in the Tincture, and it is done.

This is a Varnish of great use to lay over Gold, and Silver or any thing which is exposed to the Air.

VIII. To make the common Varnish.

Take spirit of Wine a quart, Rozin one ounce, Gum-lake a sufficient quantity, dissolve the Gums in a gentle heat (being close covered) and let them settle: then gently decant off the clear, which keep in a close Glass-bottle for use.

The thick which remains, you may strain through a cloth, and keep for other purposes.

IX. To make a red Varnish.

Take spirit of Wine a quart, Gum-lake sour ounces, Sanguis Draconis in fine powder eight ounces, Cochenele one ounce, digest a week over a gentle heat, then strain it for use.

X. To make a Tellow Varnish.

Take spirit of Wine a pint, in which insuse (three or four days) Sassron half an ounce, then strain it, and add Aloes Succotrina one ounce, Sanguis Draconis two ounces, which digest a week over a gentle heat close covered, then strain it for use.

XI. An Universal Varnish, the best of all others.

Take good Gum-Sandrack (but Gum-Anime is better) diffolve it in the highest rectified spirit of Wine (an ounce and half more or less to a pint) and it is done.

Where note, 1. That unless the Spirits be highly rectified the Varnish cannot be good. 2. Some mix boiled Turpentine with it; others Chymical oyls of deep colours (as of Cloves, Mace, Nutmegs, Caramays, Cinnamon) according to the intent. 3. That it ought to be kept in a glass bottle close stopped, lest it curdle, and the Gums separate.

XII. The Indian Varnish for Cabinets, Coaches, and

Such like.

Take the highest rectified spirit of Wine a quart, seed Lake or shell Lake five ounces, put them into a glass body; and dissolve the Lake in Balneo (but beware less the water in the Balneum boil, for that will turn the Varnish white) this done strain the matter through a Flannel bag, and keep it in a glass bottle close stopt for use.

Where note, 1. That if the spirit is good, it will (if you put Gun-powder into it) burn all away and fire the

Gun-

Gun-powder. 2. That this Varnish done over leaf Silver, turns the Silver of a Gold colour. 3. That this is that Varnish which Coach-makers and others use for that purpose. 4. That it preserves the Silver which it is laid upon from the injuries of the Air. 5. That being laid upon any colour it makes it look infinitely the more beautiful. 6. That if it lies rough you may polish it with the impalpable powder of Emery and water.

XIII. To make another excellent white Varnish.

Take of the best rectified spirit of Wine a pint and half; Gum-Sandrack, Mastick, and five ounces, Gum-Anime one ounce: scrape or cleanse the Gums; beat them a-part into fine powder, and dissolve them in the spirit in a gentle Balneo, not full-out boiling; which will be done in about eight hours, stopping the bottle in which the Ingredients are: when they are dissolved, keep them in the same

bottle close stopt for use.

1. When you use it put a little into a Gally-pot, stopping the remainder close: lay on the Varnish with a brush several times, letting it stand but an hour before the Fire, between each washing over. 2. To prepare the Paper. Take Ising-glass cut small one ounce: Spring-water half a pint; mix and digest cold twenty four hours; then pour off and cast away that water: this done put to the remaining matter new Spring-water a pint, make a perfect disfolution over a gentle heat, or in Balneo, then put it into a Gallypot, and keep it for use. 3. When you use it heat it but just warm, in the same pot, and with a brush of Camels hair dry wipe over your paper (being first pasted upon a board and dryed) then set it to dry about half a yard distant from the fire; and when it is throughly dry, go over your paper again in the same manner, repeating this last work so often, till it looks like glass. 4. This done, lay on the Varnish, as before directed, then dry it: Lastly, after three

three or four days or more, polish it with impalpable powder of Trippoli, Emery, or Patty, by help of a Rag, and a little fair water.

XIV. To make common Varnifo.

Take oyl of Turpentine and oyl of Spike, Gum-Sandrack, of each a pound, mix the oyls together, and let them stand over the fire, till the Sandrack is dissolved; and it is done. If the fire should chance to catch hold on it, clap a pewter dish, or cover the top of the Vessel close, and it will immediately go out.

#### CHAP. XXVI.

## Of the manner of Varnishing.

I. The intent of Varnishing is either to preserve the gloss of paintings or pictures, or else to represent and imitate the forms of shining and perlucid bodies.

II. To Varnish paintings and pictures, 'tis no more but with a pencil dip in the varnish to go over the same, then letting it dry; and so going over it so of-

ten as in reason you shall see convenient.

III. If you are to imitate any thing, as Marble, Tortoife-shell, Amber, Lapis Lazati, or the like: you must first make the imitation of them, upon that which you would varnish, with their proper colours, as in Limning or Painting with oyl, which must be throughly dry: then by the second Section go over all with the varnish, so often till you see it thick enough; letting it dry every time leifurely. For Example sake.

IV. To imitate Marble.

Take of the Universal varnish at the eleventh Section Section of the five and twentieth Chapter, with which mingleLamp-black (or other black) and White-lead finely beaten, and with a brush pencil, marble the thing you would varnish according to your fancy; lastly, being dry, strike it again two or three times over with clear varnish alone, and it will be perfect.

V. To imitate Tortoife fell.

First lay a white ground, then with convenient colours (as Vermilion with Auripigment) duly mixt with common varnish, streak and shadow the white ground with any wild fancy (as neatly imitating Tortoile shell as you can ) which being dry, strike it here and there with the red varnish (mixed with a little Cinnabar or Indian Lake) then up and down the work as nature requires, touch it with varnish mixed with any good black; then stroke it over with Universal varnilb four or five times, letting it dry every time; lastly, let it dry well a week, and with Pumice stone (in fine powder) and a wet cloth polish it by rubbing; then go over it again three or four times with the Universal varnish and (if need require ) polish it again with fine purry as before after which you may once again firike it over with the faid Varnish, and it will be done.

VI. To imitate Tortoife-shell upon Silver or Gold.

A white ground being laid, and fineared over with Vermilion or the like; lay over the fame leaves of Silver or Gold (as we have taught in other places) either with Gum-Ammoniacum, Lake, common Varnish or glair; this done, and being dryed, shadow reaccording to reason; striking it over here and there with yellow Varnish, and with the yellow Varnish mixed with a little red Varnish; (all things being done in imitation of the shell) strike it several times over with the Universal Varnish, and polish it (in all respects) as before.

VII. To imitate Lapis Lazuli,

Upon a ground of White-lead, Spodium or the like in common Varnish (being first dry ) lay Ultramarine or some other pure blew well mixed with the Universal Varnish, so as that the ground may not appear: then with wild irregular streaks ( in resemblance of Nature) with liquor or shell Gold, run straglingly all over the blew, adding very small specks upon the blew part, of fuch various colours, as are usually to be seen upon the stone,

#### CHAP. XXVII. Cinador or indian lake) then up and

Experimental Observations of Vegetable Colosers in General sin : Nonla poor you.

A Strong infusion of Galls filtred, mixed with a strong and clear solution of Vitriol, makes a mixture as black as Ink: which with a little strong Oyl of Vitriol is made transparent again : after which the black colour is regained again, by the affirfion of a little quantity of a strong solution of Sale of Tartar.

The first black ( although pale in writing yet ) being

dry, appears to be good Ink.

with Vermillon or II. Decoction of dried red Roses in fair water, mixed with a little filtrated folution of blew Vitriol made a black colour : this mixed with a little Aguafortis turn'd it from a black, to a deep red; which by affusion of a little spirit of Urine, may be reduced straight to a thick and black colour.

III. Tellow wax is whitened by diffolving it over the fire in spirit of Wine, letting it boil a little, and then exhaling the spirit of Wine; or else whilst it is hot, feparating it by filtration. IV. Fair

IV. Fair water mixed with a blood red Tincture of Benjamin drawn with spirit of Wine, immediately makes it of a milk white colour.

V. Blackness may be taken away with oyl of Vitriols fo black pieces of Silk or Hair I have turn'd to a kind

of yellow.

VI. A handful of Lignum Nephriticum rasped, insufed in four pound of spring water, yields between the light and the eye an almost golden colour (unless the insusion be too strong) but with the eye between the light and it (in a clear vial) a lovely blew as indeed it is: this with spirit of Vinegar may be made to varnish (still keeping its golden colour) and after with oyl of Tartar per deliquium may be restored again.

VII. Cloth died with blew and Woad, is by the

yellow decoction of Luteola died into a green.

VIII. Syrup of Violets mixed with a high folution of Gold in Aqua regia, produces a reddish mixture; and with a high folution of filings of Copper in spirit

of Urine, a lovely fair green.

IX. Syrup of Violets mixt with a little juyce of Lemons, spirit of Salt, Vinegar, or the like acid Salt, will be immediately red; but mixt with oyl of Tartar, or a solution of pot-ashes it will in a moment be perfect green: the like in juice of blew-bottles.

X. A good quantity of oyl of Tartar, put into a ftrong folution of Verdigrife, gives a delightful blew, which may be variously changed by adding spirit of

Urine, or Hartshorn.

XI. Although red Roses hung over the sume of Sulphur, lose all their redness, and become white yet oyl of Sulphur (which is nothing but the sumes condensed) doth wonderfully heighten the tincture of the same.

XII. Cochenele will have its colour far more height-

ned by spirit of Urine, than by rectified spirit of Wine: and one grane of Cochenele in a good quantity of spirit of Urine, being put into one hundred twenty six ounces of water, tinged it (although but faintly:) which amounts to above one hundred twenty five thousand times its own weight.

XIII. Twenty grains of Cochenele being mixed with an ounce of Saccharum Saturm, makes a most glorious purple colour: and so accordingly as the quantity is either diminished or encreased, so the pur-

ple colour shall be either lighter or deeper.

XIV. A few grains of Cochenele being mixed with the Lixivium of Quick-lime in a due proportion, makes a fading purple colour, of the greatest glory imaginable in the world.

XV. The juice of privet berries with spirit of Salt, is turned into a lovely red: but, with a strong solution

of pot-affies into a delightful green.

XVI. Upon things red by nature, as Syrup of Clove-gilliflowers, juice of Buckthorn berries, infusion of Red Roses, Brazil, &c. Spirit of Salt makes no considerable change, but rather a lighter red: but other salts turn them into a greenish; especially juice of buckthorn berries.

XVII. Juice of Jasmin and snow drops, by a strong alcalizate solution, was (although of no colour) run-

ed into a deep greenish yellow.

XVIA Buckehorn berries being gathered green and dried are called Sap-berries, which being infused in Alum-water gives a fair yellow (which is used by Bookbinders for the edges of their Books, and to colour Leather also:) being gathered when they are black, they are called Sap green, and make a green colour being put into a Brass or Copper vessel for three or four days; or a little heated upon the fire, and mixed with Alum

in powder, and preffed forth; so put into bladders, hanging it up till it is dry: and being gathered about the end of November, (when they are ready to drop) they yield a purplish colour.

XIX. Tinoture of Cochenele, diluted never so much with fair water, will never yield a yellow colour: I single drop of a deep solution in spirit of Urine, diluted in an ounce of fair water, makes a fair Pink, or

Carnation.

XX. Oyl or spirit of Turpentine digested with pure white Sugar of lead, yields in a short time a high red tincture, which Chymists call Ballamum Saturni.

XXI. Spirit of Salt dropt into a strong infusion of Cochenele or juice of black cherries, makes immediately a fair red: but dropt into the infusion of Brazil, a kind of yellow: so the filtrated tincture of Balanstins mixed with good spirit of Urine, or the like, turns of a darkish green; but with spirit of Salt, a high redness, like rich Claret wine; which glorious colour may in a moment be destroyed, and turned into a dirty green, by spirit of Urine.

XXII. A high infusion of Lignum Nephriticum, mixed with spirit of Urine gives so deep a blew, as to make the liquor opacous: which after a day or two vanishes,

and leaves the liquor of a bright amber colour.

Where note that instead of Spirit of Urine you may use

oyl of Tartar, or a strong solution of pot-askes.

XXIII. Infusion of Logwood in fair water (mixt with spirit of Sal Armoniack) straight turns into a deep, rich, lovely purple; two or three drops to a spoonful is enough, lest the colour be so deep, as to be opacous.

XXIV. Spirit of Sal Armoniack will turn syrup of

Violets to a lovely green.

XXV. Infusion of Litrose in fair water gives in a

clear glass a purple colour: but by addition of spirit of Salt, it will be wholly changed into a glorious yellow.

XXVI. The Infusions and juices of several plants will be much altered by a solution of Lead in spirit of Vinegar: it will turn insusion of red rose leaves into a sad green.

XXVII So Tincture of red roles in fair water, would be turned into a thick green, with the folution of Minium in spirit of Vinegar; and then with the addition of oyl of Virriol the resolved Lead would precipitate white, leaving the liquor of a clear, high red colour again.

XXVIII. We have not yet found, that to exhibit strong variety of colours, there need be imployed any more than these five, White, Black, Red, Blew, Yellow: for these being variously compounded and decompounded, exhibit a variety and number of colours: such as those who are strangers to painting can hardly imagine.

XXIX. So Black and White variously mixed, make 2 vast company of light and deep Grays: Blew and Yellow, many Greens: Red and Yellow, Orange-tawnies: Red and White, Carnations: Red and Blew, Purples, &c., producing many colours for which we want names.

XXX. Acid falts deftroy a blew colour : Sulphureous, Urinous or fixed restore it.

XXXI. Acid and Alcalizate falts with many bodies that abound with Sulphureous or only parts will produce a red, as is manifest in the Tincture of Sulphur, made with Lixiviums of Calcined Tartar or pot-asses.

XXXII. Lastly it may be worth trial (fince it hath succeeded in some experiments) so to take away the colour of a Liquor, as that it may be colourless: which in what we have tryed, was thus: first by putting into the Tincure, Liquor, or Juice, a quantity of the solution of pot-ashes or oyl of Tartar per deliquium; and then affusing

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fusing a good or strong solution of Alum, which in our observations precipitated the tinging matter, or gathered it into one body (like as it were curds) and so less the Liquor transparent and clear as Crystal,

### CHAP. XXVIII.

General Experimental observations of Mineral Colours.

Sublimate dissolved in fair water, and mixed with a little spirit of Urine, makes a milk white mixture in a moment: which by addition of Aquafortis, immediately again becomes transparent.

II. If Sublimate two ounces, and Tin-glass one ounce be sublimed together, you will have a sublimate not inferiour to the best Orient Pearls in the world.

III. Silver diffolved in Aqua fortis and evaporated to dryness, and fair water poured two or three times thereon, and evaporated, till the calx is dry, leaves it of a Snow whiteness: which rubbed upon the skin, (wetted with spittle, water or the like) produces a deep blackness, not to be obliterated in some days.

With this, Ivory, Hair and Horns may be dyed in fair water of a lasting black.

IV. Coral diffolved by oyl of Vitriol, Sulphur, or spirit of vinegar, and precipitated by oyl of Tartar yields a Snow whiteness. The same of Crude Lead and Quicksilver dissolved in Aqua fortis: So butter of Antimony rectified by bare affusion in much sair water, will (though Unctuous) be precipitated into that Snow white powder which (being washed from its corrosive salts) is called Mercurius Vita: the like of which may

be made without the addition of any Mercury at all.

V. Mercur

V. Mercury Sublimate and precipitate yields (with the spirit of Urine, Hartshorn, or the like) a white precipitate: but with the solution of Pot-ashes or other Lixiviate Salts an Orange Tawny. And if on a filtrated solution of Vitriol, you put the solution of a fixed salt; there will subside a copious substance far from whiteness, which Chymists call the Sulphur of Vitriol.

VI. If Copper two ounces be mixt with Tin one ounce, the reddiffness will vanish: and if Arsenick (calcined with Nitre) in a just proportion be mixed with melted Copper, it will be blanched both within

and without.

VII. Fine powders of blew Bice, and yellow Orpiment flightly mixed, give a good green: and a high yellow folution of good Gold in Aqua regia, mixed with a due quantity of a deep blew folution of crude Copper in strong Spirit of Urine, produces a transparent green: And so blew and yellow Amel sused to together in the stame of a Lamp, being strongly blowed on without ceasing, produces at length a green colour.

VIII. An urinous falt, largely put into the diffolution of blew Vitriol in fair water, turn'd the liquor and corpuscles (which resided) into a yellowish colour

like yellow Oker.

IX. Verdigrife ground with Sal Armoniack and the like (digested for a while in a dunghil) makes a glorious blew.

X. The true glass of Antimony extracted with acid spirits (with or without Wine) yields a red tincture.

XI. Balfam of Sulphur ( of a deep red in the glass) shaked about, or dropt on paper gives a yellow stain.

XII. If Brimstone and Sal-Armoniack in powder, of each five ounces, be mixed with quick-lime in powder fix ounces, and distilled in a Retort in fand by degrees; you will have a volatil spirit of Sulphur of excellent

cellent redness, though none of the ingredients be so. Souls of of Annifeeds mixed with oyl of Vitrial, gives

in a trice a blood red Colour, which foon decays.

XIII. Fine Silver dissolved in Aqua fortis, and precipitated with spirit of Salt; upon the first decanting the liquor, the remaining matter will be purely white, but lying uncovered, what is subject to the ambient

Air will lose its whiteness.

XIV. Sublimate diffolved in a quantity of water and filtred, till it is as clear as Crystal, mixed (in a Venice glass) with good oyl of Tartar per deliquium filtred, (three or four drops to a spoonful) yields an opacous liquor or a deep Orange colour; after which if four or five drops of oyl of Vitriol be dropt in, and the glass straightway be strongly shaked, the whole liquor will (to admiration) be colourless without sediment. And if the filtred solution of sublimed Sal-Armoniath and Sublimate of each alike be mixt with the solution of an Aliali, it will be white.

XV. Spirit of Sal-Armoniack makes the folution of Verdigrife an excellent Azure; but it makes the fo-

lution of Sublimate yield a white precipitate.

XVI. So the folution of filings of Copper in spirit of Urine (made by fermentation) gives a lovely Azure colour: which with oyl of Vitriol (a few drops to a spoonful) is deprived in a trice of the same, and makes it like fair water. And so a solution of Verdigrise in fair water, mixed with strong spirit of Salt, or dephlegmed Aqua fortis, makes the greenness almost totally to disappear.

XVII. Quick-filver mixed with three or four times its weight of good oyl of Vitriol, and the oyl drawn off in fand, through a glass retort, leaves a Snow white precipitate; which by affulion of fair water, becomes one of the lovelieft light yellows in the world, and a durable colour.

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XVIII. Tin

XVIII. Tin calcined per se by fire, affords a very white calx called Putty: Lead, a red powder called Minium: Copper a dark or greyish powder: Iron a dirty yellowish colour, called Crocus Martis: and

Mercury a red powder.

XIX. Gold diffolved in Aqua Regia Ennobles the Menfiruum with its own colour: Silver Coyn diffolved in Aqua fortis yields a tincture like that of Copper; but fine Silver a kind of faint blewishness: Copper diffolved in spirit of Sugar (drawn offin a glass Retort) or in oyl or spirit of Turpentine, affords a green tincture; but in Aqua fortis, a blew.

XX. Vermilion is made of Mercury and Brimstone

fublimed together in a due proportion.

XXI. Glass may have given to it a lovely golden colour with Quick-Silver; but it is now coloured yellow generally with calx of Silver; yet shell-Silver, (such as is used with pen or pencil) mixed with a convenient proportion of powdered glass in three or four hours suspense.

XXII. Glass is tinged green (by the Glass-men) with the Calx of Venus: which Calx mixed with an hundred times its weight of fair glass gave in fusion a

blew coloured mass.

XXIII. Putty (which is Tin calcined) as it is white of it felf, so it turns the purer fort of glass metal into a white mass, which when opacous enough, serves for

white Amel.

XXIV. This white Amel is as it were the Basis of all those fine Concretes, that Gold-smiths, and several Artificers use, in the curious Art of Enameling; for this white and sussible substance, will receive into it self, without spoiling them, the colours of divers other Mineral substances, which like it will endure the fire.

XXV. Glass is also tinged blew with the dark mineral called Zaffora; and with Manganess or Magnessia in a certain proportion, which will tinge glass of a red colour; and also of a Purplish or Murry; and with a greater quantity, into that deep colour which passes for black.

XXVI. Yellow Orpiment fublimed with Sea-Salt, yields a white and Crystalline Arfenick; Arfenick coloured with pure Nitre being duly added to Copper in the fusion, gives it a whiteness both within and

without.

XXVII. So Lapis Calaminaris turns Copper into

Brass.

XXVIII. And Zink duly mixed with Copper when 'tis in fusion, gives it the noblest golden colour that was ever seen in the best gold.

XXIX. Copper diffolved in Aqua fortis will imbue

feveral bodies of the colour of the folution.

XXX. Lastly, Gold dissolved in Aqua regia will (though not commonly known) dye Horns, Ivories, and other Bones of a durable purple colour: And the Crystals of Silver made with Aqua fortis, (though they appear white) will presently dye the Skin, Nails, Hair, Horn, and Bones, with a Black not to be washed off.

## CHAP. XXIX.

Of Metals.

I. To harden Quick-filver. .

Cast your Lead separated from its dross into a vessel, and when it begins to cool, thrust in the point of a stick, which take out again and cast in the Argent Vive, and it will congeal: then beat it in a mortar.

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morear, and do so often; when it is hard, melt it often and put it into fair water, doing it so long till it is hard enough, then being all in a peice, boyl it in Linseed oyl, the space of six hours, and it will become Malleable, and may be hammered.

II. To tinge Quick-silver of the colour of Gold.

Break it into small pieces (being hardned) which put into a Crucible, with the powder of Gadnia, firatum sum super firatum, mixed with Pomegranate peels, Turmerick (beaten fine) and Raisons, cover the Crucible and lute it well, dry it well; and then set it on a fire for fix or seven hours, that it may be redhot; then blow it with bellows till it run, which then let cool whilst covered with coals, and it will have the colour of gold.

III. To fix Quick-filver being hardned.

This is done with fine powder of Crystal glass, laid with the Meral stratum super stratum in a Crucible covered and luted; heating it all over red-hot, and then melting of it.

IV. To make Quick-silver malleable.

First harden it by the first Section, then break the Meral into small pieces, and boil it a quarter of an hour in sharp vinegar: then add a little Sal-Armoniack, and digest all together for ten or twelve days; then boil all together in a luted Crucible, till it is red-hot, and by degrees crack: lastly, hang the Mercury in a pot with Brimstone at bottom to cover it; lute it and set it into the fire, that it may grow hot by degrees, and receive the sume of the Sulphur; do thus for a month once a day, and the Mercury will run and be hammered.

V. Another way of singing Mercury.

Take purified Mercury one ounce, Sulphur two ounces, Aqua forcis three ounces, let them all stand till

till the water grow clear; diffil this with its fediment, and at bottom of the Limbeck you shall find the Mercury hard, and of an exact colour.

VI. To colour and foften Gold.

Dissolve Verdigrise in vinegar, and strain it through a felt, then congeal, and when it begins to wax thick, put to it some Sal Armoniack, and set it harden a good while, then melt gold with it, and it will heighten the colour and make it soft.

VII. To make Gold and Silver Softer.

Take Mercury Sublimate, Sal-Armoniack, of each alike, powder them, melt the gold, and put to it a little of this powder, and it will be foft.

VIII. Another way to do the same.

Take Vitriol, Verdet, Sal-Armoniack, burnt Brals, of each half an ounce, mix them with Aqua fortis, let it fo repose in the heat two days, then let it harden, do thus three times with Aqua fortis, and let it dry, make it into powder, to one drachm put one ounce of gold three times, and it will be softer.

IX. Another way to do the same in Silver.

Take Salt-peter, Tartar, Salt, Verdet, boil all together, till the water is confumed, then put to it Urine, and let it so confume, and you shall have an oyl, which put into melted Silver will do the same.

Or thus, Take as many medges as you have melted, put them one night into a crucible in a furnace, but so as they

melt not, and they will be soft and fair.

Or thus, Take honer, oyl, of each alike, in which, quench the Gold or Silver three or four times, and it mill be softer.

Or thus, Take Mastick, Frankincense, Myrrh, Borax,

Vernix, of each a like all in powder.

Or thus, Quench the Gold or Silver in mater of Sal-Armoniack, and it will be soft.

X. To X. To tinge Silver of a Gold colour.

Take fine Gold, fine Silver, good Brass, and Brass or Copper calcin'd with Sulphur-vive, of each alike, melt them down together, and it shall appear to be gold of eighteen carets fine.

XI. Another way to tinge Silver.

Take Quick-filver, purged three ounces; leaf-gold one ounce, mix them and put them into a glass Retort well luted, put it on the fire till it grow hot; then take it off, and add to it Quick-filver purged two ounces, Sal-Armoniack one ounce, Sal Ellebrot half an ounce, Borax two drachms; then feal up the glass hermetically, and put it into a continual fire for three days; then take it our, let it cool, open the Retort, take out the matter, and powder it very fine: of which powder mix one ounce with filver five ounces, and it will tinge it into a good gold colour.

Note, Sal Ellebrot is thus made. Take pure common Salt, Sal Gem, Sal Alcali in powder, of each one ounce, juice of mints four ounces, spring water four pound, mingle them, and evaporate. And Quick-silver is purged by washing it in sharp Vinegar three or four times and

straining it; or by subliming it, which is better.

XII. To bring Silver into a Calx.

This is done by amalgamating of it with Quickfilver, and then subliming of it; or by dissolving it in Aqua fortis, and precipitating it with the solution of Salt in fair water, and then washing it with warm water often to free it from the salts: or else by mingling the filings with sublimed Mercury, and in a Retort causing the Mercury to ascend, which will leave at bottom the Calx of Silver, fit for Jewels, &c.

XIII. To blanch Silver.

Take Sal-Armoniack, Roch-Alum, Alum Plumosum, Sal Gem, Argol, Roman Vitriol, of each alike; powder and and mix them, and dissolve them in fair water, in which boil the Silver so long, till you see it wonderful white.

XIV. To colour Silver of a Gold colour.

Take Salt-peter two pound, Roch-Alum five pound, mingle, and diftil them, keeping the water for use. When you use it, melt the Silver, and quench it in the said water.

XV. To tinge Brass of a Gold colour.

Dissolve burnt Brass in Aqua fortis (made of Vitriol, Salt-peter, Alum, Verdigrise and Vermilion) and then reduce it again, and it will be much of a gold colour.

XVI. To make Brafs through white.

Heat Brass red-hot, and quench it in water distilled from Sal-Armoniack, and Egg-shells ground together, and it will be very white.

XVII. To make Brass white otherwise.

Take Egg-shells and calcine them in a Crucible, and temper them with the whites of Eggs, let it stand so three weeks; hear the Brass red-hot, and put this upon it.

XVIII. To make Brass.

Take Copper three pounds, Lapis Calaminaris one pound in powder, melt them together the space of an hour, then put it out.

XIX. The way to colour Brass white.

Diffolve a peny weight of Silver in Aqua fortis, putting it to the fire in a vessel, till the Silver turn to water; to which add as much powder of white Tartar as may drink up all the water, make it into balls, with which rub any Brass, and it will be white as Silver.

XX. To time Copper of a Gold colour.

Take Col er, Lapis Calaminaris, of each four drachms, To two drachms; heat the Copper redhot twice, thing it in piss: doing the like by the

Lapis and Tutty: take of the diffolved Copper half an ounce, adding to it Honey one ounce, boil them till the Honey look black and is dry that it may be powdered, which then beat with the Lapis and Tutty: boil them again, till the Copper is melted, and it is done.

XXI. Another way to make Copper of a Gold colour.

Take the Gall of a Goat, Arfnick, of each a fufficient quantity, and diffil them; then the Copper being bright being washed in this water, will turn into the colour of Gold.

XXII. Another way to do the Same.

Melt Copper, to which put a little Zink in filings, and the Copper will have a glorious golden colour.

XXIII. To make Copper of a white colour.

Take Sublimate, Sal-Armoniack, of each alike; boil them in Vinegar, in which quench the Copper being made red-hot; and it will be like Silver.

XXIV. Another way to whiten Copper.

Heat it red-hot divers times, and quench it in oyl of Tartar per deliquium, and it will be white.

XXV. Another way to whiten Copper.

Take Arfnick three ounces, Mercury Sublimate two ounces, Azure one ounce, mux them with good and pure greafe like an ointment, with which aroint any Copper vessel, then put that vessel into another, and set it into a digestive heat for two months, after which cleanse it with a brush and water, and it is done.

XXVI. Another way to whiten Copper.

Take Arfnick calcined with Salt-peter, and Mercury Sublimate, which cast upon melted Copper, and it will be white like Silver.

XXVII. To Soften Copper.

Melt burnt Brass with Boras in a Crucible, quench

it in Linfeed-oyl, and then beat it gently on an Anvilboil it again and quench it in oyl as before, doing thus five or fix times, till it is fost enough; and this will neatly unite with Gold, of which you may put in more by half than you can of other Brass.

XXVIII. Totinge from with a Gold colour.

Lay in a Crucible places of Iron and Brimstone, fraction super structure, cover and lute it well, and calcine in a surrace, then take them out and they will be brittle: put them into a pot with a large mouth, & put in sharp distilled vinegar, digesting till they wax red over a gentle heat: then decant the vinegar, and add new, thus doing till all the Iron be dissolved, evaporate the moissure in a glass Recort of Vescu, and cast the remaining powder on Silver, or other white Metal, and it will took like Gold.

XXIX. To make Iron or Silver of a Brafs colour.

Take Flowers of Brass, Vitriol, Sal-Armoniack, of each alike in fine powder; boil it half an hour in strong vinegar, take it from the fire, and put in Iron or Silver, covering the vessel till it be cold, and the Metal will be like to Brass, and fit to be gilded; or rub possibled Iron with Aqua fortis in which filings of Brass are dissolved.

XXX. To tinge Iron into a Brafs colour.

Melt the Ironin a Crucible, casting upon it Sulphur vive, then cast it into small rods, and beat it into pieces (for it is very brittle) then in Aqua fortis dissolve it, and evaporate the menstruum, reducing the powdet by a strong fire into a body again, and it will be good Brass.

XXXI. To whiten Iron.

First purge it, by heating it red hot, and quenching it in a water made of Lye and Vinegar, boil'd with Salt and Alum, doing this so often till it is somewhat white-

240

whitened. The fragments of the Iron beat in a mortar till the Salt is quite changed, and no blackness is left in the Liquor of it, and till the Iron is cleanfed from its dross: then Amalgamate Lead and Quickfilver together, and reduce them into a powder: lav the prepared plates of Iron and this powder fratum Super stratum in a Crucible, cover it, and lute it all over very strongly, that the least fume may not come forth, and put it into the fire for a day; at length encrease the fire, so as it may melt the Iron (which will quickly be) and repeat this work till it is white enough: It is whitened also by melting with Lead, the Marchasit or fire-stone and Arsnick. a little Silver (with which it willingly unites) with it, it gives a wonderful whiteness, scarcely ever to be changed any more, by any art whatfoever.

XXXII. To keep Iron from Rusting.

Rub it over with vinegar mixt with Ceruse; or with the marrow of a Hart: if it be rufty, oyl of Tartar per deliquium will presently take it away and cleanse it.

XXXIII. To cleanse Brass.

Take Aqua fortis and water of each alike, shake them together, and with a wollen rag dipt therein rub it over: then presently rub it with an oyly cloth; Lastly, with a dry wollen cloth dipt in powder of Lapis Calaminaris, it will be clear and bright as when new.

XXXIV. To foften Iron.

Take Alum, Sal-Armoniack, Tartar, of each alike, put them into good Vinegar, and fet them on the fire, heat the Iron, and quench it therein: or quench it four or five times in oyl, in which melted Lead hath been put fix or feven times.

XXXV. To make Iron of a Gold colour?

Take Alum of Melancy in powder, Sea-water; mix them then heat the Iron red-hot, and quench it in the same wood and alumning the same work.

XXXVI: To make Iron of a Silver colour.

Take powder of Sal-Armoniack, unflak'd-lime, mix and put them into cold water; then heat the Iron redhot, quench it therein and it will be as white as Silver.

XXXVII. To soften steel to grave upon.

This is done with a Lixivium of Oak-afhes and unflak'd Lime, by caffing the Steel into it, and letting it remain there fourteen days. Or thus, take the Gall of an Ox, man's Urine, Verjuice, and juice of Nettles, of each alike, mix them; then quench Steel red-hot therein four or five times together, and it will become very foft.

XXXVIII. To harden Iron or Steel;

Quench it fix or feven times in Hogs blood mixed with Goofe greafe, at each time drying it at the fire before you dip it again, and it will become very hard and not brittle.

XXXIX. To folder on Iron:

Set the joynts of Iron as close as you can, lay them in a glowing fire, and take of Venice-glass in powder, and the Iron being red-hot, cast the powder thereon, and it will folder of it self.

XL. To counterfeit Silver.

Take Crystal Arsnick eight ounces, Tartar six ounces, Salt-peter two ounces, Glass one ounce and an half, Sublimate half an ounce: make them severally into fine powder and mix them: then take three pound of Copper in thin plates, which put into a Crucible (with the former powder fratum super fratum) to calcine, covering it and luting it strongly, let it stand in the Furnace for about eight or ten hours: then

Lib. III.

take it out, and (being cold) break the pot, and take out all the matter, and melt it with a violent fire. casting it into some mold. Then take purged Brass two pound, of the former metal one pound; mele them together, casting in, now and then, some of the aforefaid powder, after which add half as much of fine Silver melting them together, and you have that which is defired: laftly to make it as white as Silver. boil it in Tartar.

XII. Another way to counterfeit Silver.

Take purified Tin eight ounces. Quick-filver half an ounce, and when it begins to rife in the first heat. take powder of Cantharides, and cast into it, with a lock of hair, that it may burn in it; being melted out into it the powder aforefaid, then take it fuddenly from the fire, and let it cool.

XLI!. To purge the Brafs.

It is cleanfed or purged, by casting into it when it is melted, broken Glass, Tartar, Sal-Armoniack and Salt-peter, each of them by turns, by little and little.

XLIII. To tinge Lead of a Gold colour.

Take purged Lead one pound, Sal-Armoniack, in powder, one ounce; Salt-peter half an ounce, Sal-Elebrot two drachms; put all into a Crucible for two days, and it will be throughly tinged.

XLIV. To purge Lead.

Melt it at the fire, then quench it in the sharpest Vinegar; melt it again and quench it in the juice of Celandine: melt it again and quench it in Salt-water: then in vinegar mixed with Sal-Armoniack: and lastly melt it, and put it into ashes, and it will be well cleanfed.

XLV. To make Lead of la Golden colour.

Put Quick-filver one ounce into a Crucible, fet it over the fire till it is hot, then add to it of the best leafleaf-gold one ounce, and take it from the fire, and mingle it with purified Lead melted one pound; mingle all well together with an Iron rod, to which put of the filtrated solution of Vitriol in fair water one ounce, then let it cool, and it will be of a gold colour. Difsolve the Vitriol in its equal weight of water.

XLVI. To take away the ringing and softness of Tin.

Melt the Tin, and cast in some Quick-silver, remove it from the fire, and put it into a glass Retort, with a large round belly; and a very long neck, hear it red-hot in the fire, till the Mercury sublimes and the Tin remains at bottom; do thus three or four times. The same may be done by calcining of it three or four times, by which means it will sooner be red-hot than melt.

XLVII. To take away the softness and creaking noise of

Tin.

This is done by granulating of it often, and then reducing it again, and quenching it often in vinegar and a Lixivium of Salt of Tartar. The creaking noise is taken away by melting it seven or eight several times & quenching it in Boys Urine, or else oyl of Walnuts.

XLVIII. To take away the deaf sound of Tin.

This is done by diffolying it in Aqua fortis over a gentle fire, till the water fly away: doing thus fo long till it is all turned to a calx; which mixed with calx of Silver, and reduced, performs the work.

XLIX. To make that Tin crack not.

Take Salt, Hony, of each alike, and mix them: melt your Tin and put it twelve or more times into it, then strain out the Tin, and it will purge and leave cracking; put it into a Crucible, which lute, and calcine it four and twenty hours, and it will be like calx of Gold.

L. To take away the brittleness of any Metal.

First calcine it and put it under dung, then do thus: when it is red-hot at the fire, or melted, quench it often in Aqua vita often distilled; or use about them Rosin or Turpentine, or the ovl of it, or wax, suet-Euphorbium, Myrrh, artificial Borax: for if a Metal be not malleable, unctuous bodies will oftentimes make them fofter; if all these, or some of these be made up with some moisture into little cakes: and when the metal yields to the fire, by blowing with the bellows, we cast in some of them and make them thick like mud, or clear, then fet the Metal to the fire, that it may be red-hot in burning coals, take it forth and quench it in them, and so let it remain half an hour to drink in. Or anoint the Metal with Dogs greafe, and melt it with it, for that will take away much of the brittleness of it, and make it so that it may be hammered and wrought.

LI. To colour Metal like Gold.

Take Sal-Armoniack, White Vitriol, Stone-salt, Verdigrife, of each alike, in fine powder; lay it upon the Metal, then put it into the fire for an hour, take it out and quench it in Urine, and the Metal will have the colour of Gold.

LII. To make a kind of Counterfeited Silver of Tin.

This is done by mingling Silver with Tin melted with Quick-filver, continuing it long in the fire, then being brittle, it is made tough, by keeping it in a gentle fire or under hot embers (in a Crucible) for about twenty four hours.

LIII. To Solder upon Silver, Brass, or Iron.

Take Silver sive peny weight, Brass four peny weight, melt them together for soft older, which runs soonest.

Take Silver five penr weight, Copper three peny weight, melt them together fir hard So'der.

Beat the Solder thin and lay it over the place to be Soldered.

Soldered, which must be first fitted, and bound together with Wire as occasion requires: then take Borax in powder, and temper it like pap, and lay it upon the Solder, letting it dry, then cover it with quick coals and blow, and it will run immediately; then take it presently out of the fire, and it is done.

Note, 1. If a thing is to be Soldred in two places; (which cannot be well done at one time) you must first Solder with the hard Solder, and then with the soft; for if it be first done with the soft; it will unsolder again before the other be Soldred. 2. That if you would not have your Solder run about the piece to be Soldred, rub those places over with Chalk.

LIV. To make the Silver Tree of the Philosophers.

Take Aqua fortis four ounces, fine Silver one ounces, which dissolve in it: then take Aqua fortis two ounces, in which dissolve Quick-silver: mix these two Liquors together in a clear glass, with a pint of pure water; stop the glass close, and after a day, you shall see a Tree to grow by little and little, which is wonderful and pleasant to behold.

LV. To make the Golden Tree of the Philosophers.

Take oyl of Sand or Flints, oyl of Tartar per deliquium, of each alike, mix them well together, then dissolve Sol in Aqua Regis, and evaporate the menstruum, dry the Calx by the fire, but make it not too hot (for then it will lose its growing quality) break it into little bits (not into powder) which bits put into the aforesaid liquor, a fingers breadth one from another in a very clear glass, keep the liquor from the Air, and let the Calx stand still, and the bits of Calx will presently begin to grow: first swell; then put forth one or two stems; then divers branches and twigs, so exactly, as you cannot but wonder to see.

Phere note, that this growing is not imaginary but real.

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LVI. To make the Steel Tree of the Philosophers.

Diffolve Steel in rectified spirit or oyl of Salt, so shall you have a green and sweet solution, smelling like Brimstone; filter it, and abstract all the moisture with a gentle hear, and there will distil over a liquor, as sweet as rain water (for Steel by reason of its dryness detains the Corrosiveness of the spirit of Salt which remaineth in the bottom, like a blood-red mass, and it is as hot on the tongue as fire:) dissolve this blood-red mass in oyl of Flints or Sand, and you shall see it grow up in two or three hours like a Tree with stem and branches.

If you prove this Tree at the test, it will yield good Gold, mbich it draweth from the oyl of Sand or Flints; the said oyl being full of a pure golden Sulphur.

LVH. To make oil of Flints or Sand.

Take of most pure Salt of Tartar in fine powder twenty ounces, fmall Sand, Flints, Pebbles, or Crystals in fine powder five ounces, mix them; put as much of this as will fill an Egg-hell into a Crucible. fet it in a Furnace, and make it red hot, and prefently there will come over a thick and white spirit, take out the Crucible whileft it is hot, and that which is in it, like transparent glass, keep from the Air; after beat it to powder, and lay it is a moist place, and it will diffolve into a thick, fat oyl, which is the oyl of Flints, Sand, Pebbles or Crystals. This onl precipitateth Metals, and makes the Calx there more heavy than onl of Tartar doth; it is of a golden nature, and extracts colours from all Minerals; it is fixed in all fires, maketh fine Crystals, and Borax, and maturateth imperfect Metals into Gold.

LVIII. To melt Metals quickly.

Take a Crucible, and make in it a lay or course of the powder of any Metal, then lay upon it a lay of Sulphur,

Sulphur, Salt-peter and Saw-dust, of each alike mixed together, put a coal of fire to it, and the Metal

will immediately be in a mass.

LIX. He that shall observe the work and reafon of the Silver, Golden and Steel Trees, may in like manner produce the like out of the Calx of other Metals.

LX. To whiten Silver, &c.

Silver veffels or inftruments boiled with Salt, Alum, and Tartar, gives them that whiteness and clearness, which they would scarcely be brought to by brushing, Pumice-stone, or Putty: old sullied pieces may be brought in a trice to the like fairness, by the help of Warm Aqua fortis.

LXI. To blanch Venus.

Take Arfenick 8 ounces: Sal-niter, white Tartar, of each two ounces, Borax one ounce: being in fine powder, Cement Venus therewith, by laying thin plates, lay upon lay, after 48 hours of a Cementing heat (the Crucible being strong, well stopt, or covered and luted strongly) encrease the fire and cause it to melt all down together.

LXII. Another way to do the same.

Sublime Rasped or granulated Jupiter with Niter into flowers, of which take one ounce: Mercury sublimate as much; dissolve each in Aqua fortis: mix the solutions, and evaporate, or draw off to dryness. One ounce of this powder will blanch four or five ounces of Venus, without ever Tarnishing.

LXIII. Another way to do the same.

Take white wine Vinegar, strong Lie made of Wood ashes, so strong as to bear an Egg, of each four pounds: Sulphur, Hogs-blood, of each one pound: powder the Sulphur, mix altogether, and digest in an earthen pot close covered for eight days,

then strain it. 2. Take Venus eight pounds: melt it and quench it in the aforesaid Lye: melt it again, and quench again; this do for four times, so will the Venus be in measure prepared. 3. Take white Arsenick, Sheeps suct tried, of each a pound: white Lead four ounces: boil altogether in a Kettle, continually stirring them, till they boil to a powder, which keep for use. 4. Take the afore prepared Venus, melt it now a fifth time, to which put of your prepared powder of Arsenick, a little and a little at a time, by degrees, (the Venus being first melted) stirring it with a wooden stick, till it is dissolved in the metal, then cast it into a close Ingot. The former powder will serve for eight pounds of Venus

LXIV. Another way to do the same.

1. Take Arsenick sublimed two ounces: common salt two ounces: sublime them together three times, then is it fixed. 2. Take fine Luna in filings or leaves, half an ounce: Mercury sublimate a sufficient quantity, grind well upon a Marble stone; to which add the former prepared Arsenick, with some fixed sal Armoniack. 3. Grind them well together with Wine Vinegar distilled, in which some Borax has been dissolved, then let them dry: being dryed wet them again, with the said Vinegar, and dry again upon a soft fire: do so five times. 4. Take sine Luna one ounce: and as much of the aforesaid medicine, Venus prepared eight ounces: mix and melt them together: it will be in appearance next to perfect.

LXV. To fix Sal Armoniack for this Work.

1. Take Sal Armoniack sublimed to a perfect whiteness, put it into a glass Alembick with shead and receiver, casting upon the Sal Armoniack some good distilled Vinegar, to overtop it a hand breadth.

distil upon a soft fire. 2. Then put upon it more fresh Vinegar, and distil again: this repeat, till the Sal-Armoniack remains in the bottom; after which let the fire go out of it self, and keep the oyl close stopt for use. 3. If you take Mercury two ounces, and make it hot in the fire: then drop on it three drops of this oyl; the Mercury will be congealed into a pure Metal: of this, one part will make ten parts of Venus, as fair as Silver: the ten parts of Venus being first melted, and the Mercury one part being cast upon it.

LXVI. To fix Arfenick.

Take a strong Lye of Ashes and Quick-lime, filter it; in which dissolve Arsenick: then evaporate the humidity by boyling, and the Arsenick will be prepared and fixt.

LXVII. To whiten Copper or Brass superficially, as

white as Silver.

Take Sal-Armoniack, Alum, Niter, of each alike quantity: put to it a little of the filings of Silver refined, or leaf Silver: mix them well together; and put it into the fire, till it be red-hot in a Crucible, and till it has done smoaking. Then moisten this powder with spittle, and rub your Copper or Brass therewith, and it will be white.

LXVIII. To Gild Silver, Copper, and Brass.

r. Cleanse the Metal with Aqua fortis, by lightly washing it therewith, and immediately throwing it into fair water, or by heating it red hot, and scouring it with Salt and Tartar, and fair water, with a small wire brush. 2. Dissolve some fine Silver in Aqua fortis in a broad bottomed Vessel of Glass or Glased Earth, then over a Chasing-dish of Coals evaporate away the Aqua fortis. 3. On the remaining dry Calx put water five or six times its quantity, or as much as will

Lib. III.

will be needful perfectly to diffolve it; this water with the like heat evaporate: on which put more fresh water and evaporate again; and if need be the third time; making the fire towards the latter end fo ffrong, as to leave the Calx perfectly dry, which if your Silver be good, will be of a good white. 4. Take of this Calx, common Salt, Crystals of Tartar, of each alike in quantity or bulk, not weight: mix all well; then put the Metal into fair water. and take of the aforefaid powder with your wet fingers, and rub it well on, till you find every little cavity of the Metal sufficiently silvered over. you would have it richly done, you must rub in more of the powder, and lastly, wash the silvered Metal in fair water, and rub it hard with a dry cloth, that it may look smooth and bright. 6. This though done without Quick-filver, may last some years, and when the Silver begins to wear off, may as eafily be renewed.

LXIX. To Gild Iron and Steel.

1. You must make your Iron or Steel have the colour of Brais thus: polish the Iron or Steel, then rub it with Aqua fortis, in which filings of Brass have been diffolyed: the same understand of Silver. 2. An Amalgama of Gold and Mercury with which Gilders gild Silver, Brass, and Copper, will not gild Iron or Steel; but thus it may be done: Coat the Iron or Steel with Copper by diffolving very good Vitriol of Copper in warm water, till the Liquor be fatiated with the Vitriol: then immerse several times in the folution the Iron or Steel, first scoured till it be bright, and fuffering it to dry each time of its felf; for by this immersion being repeated often enough there will precipitate upon the Iron, enough of the cuperous particles to fill the superficial pores of the Iron.

Iron. 3. By this fafe and easie way, having overlaid the Iron with Copper, you may gild it as Copper, either by the aforefaid Amalgama, or by the former Section of this Chapter.

LXX. To prove the goodness of Sublimate.

1. Cast it on the Coals, and if it is good, it will burn with a blew stame; but if it make any other colour, it is naught, and has Arsenick in it. 2. Or thus. Take the Sublimate, and drop thereon a sew drops of Oleum Tartari per deliquium: if it turns the Sublimate of a deep yellow, reddish, or orange-tawny, it is good; but if not, or it be black, there is Arsenick in it.

LXXI Another way to fix Sal Armoniack.

Grind it very well, put it in a Coffin of Paper, which put in a pot full of Quick-lime in fine powder, that the paper may be in the midft of the lime: then cover the pot well and lute it close, and put it in a potters furnace, and it will be fixed.

LXXII. To make an Oyl which gives the Colour of Gold.

Make a strong Lye with Lime and Tartar calcined with Alcali: in it dissolve Sulphur in powder and Sassin of Mars; then put it into the fire, and make it boyl till it waxes red: after put all into a glass bottle or Alembick, with a receiver: distill and take the water; this water cohobate 12. times, or untill you see a whiteness go forth of the Alembick. The sign being come, all that which remains in the bottom, is a fixt Oyl, that which does give the true Colour of Gold, to whatsoever is put into it, and is an excellent secret in other Chymical works.

LX III. An Oyl of Gold.

1. Take Sulphur Vive, Niter; of each a like quantity, diftil, and it will be white and fixed. 2. After the flame fublime this fixed Sulphur three times with equal

equal weight of Sal-Armoniack, which resolve again per deliquium. 2. Take a sufficient quantity of this dissolved liquor, and cast it upon a Golden Duckate in flux, and it will become an Oyl. 4. This oyl becoming cold will congeal, and one part thereof transmutes 50. Parts of Mercury.

LXXIV. To make living filver or Gold.

1. Take of the red Lyon (i. e. red native Cinnaber) 12. parts, pulverise it well: then grind it with one part of Calx of fine filver, or purified Gold. 2. Put all into a small bolt-head, set it in sand to the neck; luting the neck of the glass very well. 3. Give the first degree of fire for a week: the next week, the fecond degree: then the third degree: and the 4th degree, the fourth and last week to a hissing degree, that is if you let a drop of water fall upon the fand, it will hifs. 4. Then let the fire go out, and cut the glass with a ring: take the Crystalline matter like (a ring near the neck of the glass) pulverise and grind it with its weight of the calx of Sol or Luna aforesaid. 5. Pass the aforementioned four degrees in 8 hours to a hiffing; open the glass as before, and take the starry Crown, which is the living filver, which augment by digestion, with a twelth part of Luna or Sol at a time, as often as you please, or till you have a sufficient quantity of living Luna or Sol. 6 Take a small quantity of this living Sol or Luna, and digest it in Ashes, until it changes colours, and towards white or red Earth. 7. Then take this white or redEarth, with amalgama, with living filver and Calx: digest again in a glass Hermetically sealed, till it come to perfect whiteness. or redness.

LXXV. To whiten Copper or Iron.

Take Calx of Silver, grind it with 2 parts of Calcined precipitate Arlenick, and one part of white precipitate

precipitate Mercury, imbibe them with water made of Sal-Niter, Sal-Armoniack and Litharge, of each equal parts; do this, till they have drunk up their weight of the water: put one part hereof on 4 parts of prepared Copper or Iron.

LXXVI. Another way to do the same.

Take Calcined Silver, Tin Calcined and diffolved, of each a like quantity: mix, dry, and cover it with twice as much fublished Arfenick.

LXXVII. Another way to do the same.

Take Calcined Silver, Arsenick, Sulphur sublimed and ground, Sal-Armoniack, of each a like quantity: mix, & sublime all thrice; cast one part upon 6 parts of prepared Iron or Copper.

LXXVIII. A Good Dealbation of Venus.

Take Realgar one ounce: Argent Vive fublimed 3 ounces and a half: Tartar Calcined an ounce: grind and incorporate, and put them into a vial with a neck. 12 inches long, and its Orifice fo wide as two fingers may enter: lute it, and fet it over a fire covered with a cloth. First make a gentle fire for a quarter of an hour; afterwards augment the fire underneath, and round about, till the furnace be very hot and red. When all is cold, break the vessel, and take out the metalline matter. This may easily be brought to perfection.

LXXIX. Another for the same purpose.

Upon Tutia sublime one part of Mercury sublimate and two parts of Arsenick sublimed, untill it shall have ingress. This clearly and very speciously whitens Venus.

LXXX. Another for the same.

Imbibe 3 parts of Mercury sublimed, and two parts of Arsenick sublimed with 3 parts Litharge dissolved: to these eight add other 8 parts of Arsenick sublimed:

grind

grind them together, and flux them with Oyl of Tartar, fo may you (with it) whiten prepared Venus at pleasure.

LXXXI. Another for the fame.

Grind Metalline Arsenick with as much Calk of Luna, and imbibe the mixture with water of Sal-Armoniack; dry and grind: afterwards diffolve salt of Tartar in water of salt Peter; with which Oyl imbibe the medicine, and dry it. Repeat, this thrice incerating and drying. This is an admirable thing.

LXXXII. Another for the Same.

Imbibe Jupiter Calcined, washed and dryed, so often with Metalline Arsenick, with half as much sublimed Mercury, till it flows and enters Venus; for it whitens the same (if first prepared) gloriously.

LXXXIII. Another for the fame.

Upon Tutia one part fublimed, diffolved, and coagulated, fublime white Arfenick three parts; reiterate the fublimation upon it four times, that it may have ingrefs. With them adjoyn half as much (as the whole is) of fublimate Mercury, grinding and incerating 4 times with water of Sal-Armoniack, Niter and Tartar, of each alike. With this when Coagulated, Cement prepared plates of Venus, and melt, and you will have a very beautifull metal.

LXXXIV. Another for the same purpose.

Grind Venus Calcined and incerated, to which add Arsenick sublimed, and half a part of Mercury sublimed; with which being well ground and mixed, add a little water of Sal-Armoniack, and incerating upon a Marble dry and sublime; revert the sublimate upon the faces, again imbibing; do so three times: the fourth time imbibe with the water of Niter, and sublime what can be sublimed: reiterate this work, till it remain shuid in the bottom. This upon Copper will make a glorious whiteness.

CHAP.

## CHAP. XXX.

Of the Inframents and Materials of Casting.

I. HE that would learn to cast must be provided of all the chief Tools thereto belonging; which are 1. A Trough, 2. Sand. 3. A Flask, 4. Skyev. 5. Tripoli. 6. The Medal or Form. 7. A Furnace. 8. Cracibles. 9. A Pipe. 10. Tongs. 11. Two Oak Plates. 12. Pleagets of wool. 13. Oyl and Turpentine. 14. A Hares Foot, 15. Brashos.

II. The Trough is a four-square thing about half a foot deep, or something more; and its use is to hold

the Sand.

III. Of Sand there are various forts, the chief are High-gate Sand, and Tripoli; the which to make fit

for the work you must order thus:

If it is High-gate Sand, you must sinely sift it; if Tripoli, you must first beat it sine, then site it through a sine Sieve; to either of these sine Sands you must put of pure sine Bole (an ounce to nine ounces) well beaten, dissolved in mater, and lastly reduced into sine powder; which powders you must moderately mossen with this Magisterial water, viz. siltrated Brine made of decrepitated common Salt: or the same, mixed with glair of Eggs.

IV. The Flash is a pair of Oval Irons, containing only fides to hold the Sand, which must be pressed hard thereinto: and a passage or mouth for the Me-

tal to run in at.

IV. The Strew is an Iron Press, between which the Flask is put and prest, after that it is filled with Sand, and hath received the form or impression to be cast.

VI. Tripoli

VI. Tripoli is that of which the second fort of Sand is made, which here ought to be calcined and beaten into impalpable powder, to strew over the sandy moulds; first that the sides of the Flask may not cleave together when they are full; secondly that the thing cast may have the perfect form and impression, without the least scratch or blemish imaginable.

VII. The Medal or Form, is that which is to be impressed upon the Sand, whose likeness we would

imitate.

VIII. The Furnace is that which contains the fire, where the Crucible is put, for the Metal to melt in,

which is generally melted with Charcoal.

IX. The Crucibles are calcining or melting pots, (commonly three-square) made so as they may endure the fire all over, in which the Metal is to be melted.

X. The Pipe is a hollow Reed, or piece of Tin, to

blow coals and filth out of the Crucible.

XI. The Tongs are a crooked Instrument to take coals out of the Crucible with, as also to stir and repair the fire; and to take the pot out of the Furnace when you go to cast.

XII. The two Oak plates are to be smooth, and to be put between the Flask and the sides of the Skrew, on

each fide.

XIII. Pleagets of wool are to be put between the Oak plates and the Sand, to fill up empty spaces if there be

any.

XIV. The Oyl and Turpentine is to wet some paper or cotton threads, which must be set on fire, to smook the Impression or Mould (being dry) that the Metal may run the better.

XV. The Hares-foot is to wipe the hollow places in the Mould, if they should be too much filled with

fmoak. XVI. The

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XVI. The Brulles ought to be two, to wit, one with thick bar Wire strings, another with Hogs bristles, wherewith the work (both before and after casting) ought to be rubbed and cleansed.

# CHAP. XXXI.

The way and manner of Casting.

I. W Aff, the Medal in Vinegar, in which put fome Salt and Straw-affies; and rub it well with the aforesaid hair-bruth, then wash it with water, and dry it well.

II. Place the female part of the Flask upon one of the Oak plates; to that the middle part, vice that which is joyned to the other, may be downwards:

III. Then put the cleanted Medai in the Flask upon the Oak plate, in a right line to the mouth of the Flask; and if there be two, let them be placed to, that there may be a place left in the middle for the meled Metall to run in at.

IV. Then take of the aforefaid earth or fand prepared, (that is, so much moistened with the Magisterial water, that being criffhed between the hands or fingers, it will not stick but like dry flour, and will stand with the frint of the hand closed together) and press it on well in the Flask upon the Medal with the fleshy part of your fingers or hand; then with a rule strike off all the superfluous sand that sticks about the Flask.

V. This done, the pledgets of wool, or a woollen cloth, must be laid upon it, and then the other Oak plate, and then turned up with both hands, the plates being both held close.

VI. Then taking off the upper plate; put upon it

the male part of the Flask, which fill with fand in like manner (the Medal being now between ) preffing it down as before and then with a ruler striking away the fuperfluous fand.

VII. Upon which lay a woollen cloth, and gently lift off the top, or upper part of the Flask, so that

the medal may be taken forth.

VIII. All things being thus done with a knife ( or fome fuch like ) cut the passage for the Metal, which

let be a little dry'd: then,

IX. Either strew over the fide of the impression (now taken off) with a calcined Tripoli ground impalpable; applying it upon the female Flask again; turn the female Flask uppermost, which take off, and strew it in like manner, with the calcined Tripoli, and putting them together again, press them so hard, as that the fine Tripoli may receive the most perfect impression of the Medal, which then take out, by separating the fides of the Flask, and gently shaking that part which holds it, till it falls out.

X. Or with Cotton wet in Oyl and Turpentine and let on fire let the impression be smoaked; and if any funerfluous fume be taken, wipe it off with a

Hares-foot.

XI. Then joyn the fides of the Flask together, putting them with the woollen cloaths between the Oaken plates, which put into the Press, and skrew them a little.

XII. Then the Metal being melted, put it into the mould being hot, which if it be Silver, or blanched

Brass, or Copper, it will run well enough.

XIII. But if it runs not well, you may cast in about the hundredth part of Mercury sublimate, and an eighth part of Antimony; for fo it will not only run well, but also be a harder Metal.

XIV. Laftly,

XIV. Lastly, the Medal being cooled, take it near-

ly out, and keep it.

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Where note, i. That so long as the Impression or Mould is not spoiled, you may still cast more Medals therein; but when it decays you must perfectly renew the whole work as at first. 2. That you may blanch them with a pure whiteness by the ninth Section of the nine and twentieth Chapter of this Book: or thus, if they be of whitened Brass, Take Sal-Armoniack one ounce and an half, Salt-peter two ounces and an half, Leaf-filver, twenty four grains; mix them and evaporate them in a luted Crucible, having, a hole in the cover, till all the moisture is gone; being cold beat all into a fine powder; of which take one ounce, Salt, Alum, Tartar, of each one handful, fair water a sufficient quantity; mix and boyl all in a glaxed veffel, in which put the Medals, boiling them till they are purely white : then rub them with the Tartar in the bottom very well, wash them in fair water and dry them. 3. That if the Medals be of Gold, or of a golden colour, you may heighten it with Verdigrise and Urine.

### CHAP. XXXII.

Of Glass and Precious Stones.

TO melt Crystal.

Beat Crystal to bits, and put them into an Iron spoon, cover it and lute it well, and heat it in the fire till it is red-hot, which quench in oyl of Tartar: this do fo often, till they will eafily beat to powder in a mortar, which will then easily melt.

This is of use to counterfeit fewels with. II. To make a Cement for broken Glasses.

Glair of Eggs mixed with Quick-lime will joyn broken broken pieces of Glass together, and all earthen pots, so as that they shall never be broken in the lame place

again.

Or thus, Take old liquid Varnish, and joyn the pieces therewith; bind them together and dry them well in the Sun, or in an Oven, and they will hever unglew again: but then put no hot liquor into them.

Or thus, Take White lead, Red-lead, Quick-lime, Gum-landrack, of each one ounce, mix all with glar

of eight Eggs.

or that, Take White-lead, bole, liquid varnish

as much as fufficeth.

Or thus, Take White lead, Lime, glair of Eggs as much as fufficeth.

or thus, Take fine powder of glass, Quick-lime,

liquid varnish, of each a sufficient quantity.

Or thus, Take Quick-lime powdered, figured varnish, glair of Eggs of each alike: grand them upon a stone: this is a trong glew even for stones.

Or thus, Take calcined flints and Egg fitells of each alike, and with whites of Eggs and Gum-tragacanth, or diffolution of Gum-fandrack make glew, this in few days will be as hard as storie.

Or thus, Take calcined flints two pound, Quicklime four pound, Einfeed oyl fo much as may temper the mixture, this is wonderfull ftrong; but with li-

quid varnishit would be stronger.

Or thus, Take Fish glew, and beat it thin, then foak it in water till it is like paste, make rouls thereof which draw out thin: when you use it, dissolve it in fair water over the fire, letting it seeth a while, and scumming of it, and whilest it is hot use it. This not only cements glass, but Tortoise shell and all other things.

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III. Townshe Glassmeen.

Green glass is made of Fern albes, because it hath much of an Alkali Salt. Caystal or Venice-Glass is tinged green with Ore of Copper; or with the Calx of Copper five or fix grains to an ounce.

IV. To counterfeit & Diamond. on in

Take a fashine of a faint colour, put it into the middle of a Crucible in Quick-lime, and put it into a gentle fire, and heat it by degrees till it is red-hot, keep it to for fix or fleven hours alected and in the Crucible till it is cold of lost taking it out hot it should break) so will it lose all its colour, and be perfectly like a Diamond, so that no file will touch it: if the colour is not all vanished at the first heating, you must heat it again till it is perfect.

V. To prepare the Salts for counterfeit Gems.

The falts used in making counterfeit Gems, are chiefly two, the first is made of the Herb Kaly, the second of Tartar, their preparations are according to the usual way (but in Glass vessels.)

VI. To prepare the matter of which Gems are made.

The matter is either Crystal or Flint that is clear and white: put them into a Crucible in a reverberatory heat (the Grucible being covered) then take them out, and cast them into cold water, so will they crack and easily reduce to powder of which powder take an equall quantity with Salt of Tartar (or sal dikali) to which mixture add what colour you please, which must be either Meralline or Mineral: put them into a very strong Crucible (filling it about half full) cover it close, and melt all in a strong sire till it becomes like glass.

Where note, in melting you must put an Iron rod into it, and take up some of it, and if it is free from bubbles, grains, or specks, it is sustenantly if not, you must suffer till it is free.

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VII. To make a counterfeit Diamond of Crystal.

Put Crystal in a Crucible, and set it in a Glass Furnace all night, and then bring it to fine powder, mix it with equal parts of Sal Tartari, digest all night in a vehement heat, but yet not to melt, then take them out, and put them into another vessel which will stoutly endure the fire; let them stand melted two days and take out the mass.

VIII. Tomake a Chalcedon.

Mingle with the powder of Crystal, a little calcined Silver, and let it stand in fusion ewenty four hours.

IX. To make counterfeit Pearls,

Mix Calx of Luna and Egg-shells with Leaf filver ground with our best varnish, of which make paste, and having bored them with a Hogs bristle, dry them in the Sun, or an Oven.

X. To counterfeit a Ruby.

Take Sal-Alkali four ounces, Crystal three ounces, Scales of Brass half an ounce, Leaf-gold fix grains mix all, and melt them in a Reverberatory.

XI. To counterfeit a Carbuncle.

Mix Crystal with a little Red-lead, putting it into a Furnace for twenty four hours, then take it out, powder and searce it, to which add a little calcined Brass; melt all again, and add a small quantity of Leaf-gold, stirring it well three or four hours, and in a day and night it will be done.

XII. An Artificial Amethyft.

Take Crystal one pound, Manganess one drachm,

mix and melt them.

Or thus, Take Sal-Alkali three ounces, powder of Crystal four ounces, filings of Brass half an ounce, melt all in a strong fire.

XIII. An Artificial facynth.

Put Lead into a ftrong Crucible, and set it into a Furnace.

Furnace, let it stand there about fix weeks till it is like glass, and it will have the natural colour of a Jacynth not easily to be discerned.

XIV. An Artificial Chryfolite.

Mix with melted Crystal a fixth part of scales of Iron, letting it stand in a vehement fire for three days. Or thur, to the mixture of the Topaze add a little Copper.

XV. An Artificial Topaze.

To Crystal one pound, add Crocus Maris two drachms, Red-lead three ounces, first putting in the Lead, then the Crocus.

XVI. Artificial Corals.

Take the scrapings of Goats horns, beat them together and insuse them in a strong Lixivium made of
Sal fraxini for sive days: then take it out and mingle
it with Cinnaber dissolved in water; set it to a gentle
fire that it may grow thick; make it into what form
you please, dry, and polish it. Or thus, Take Minii
one ounce, Vermilion ground fine half an ounce,
Quick-lime, and powder of calcined Flints, of each fix
ounces, a Lixivium of Quick-lime and Wine, enough
to make it thick: add a little Salt, then make it into
what form you please, and boil it in Linseed-oyl.

XVII. An Artificial Emerald.

Take Brafs (three onnes) calcined in powder, which put again into the Furnace with oyl and a weaker fire: let it stay there four days, adding a double quantity of fine sand or powder of Crystal: after it is something hard, keep it at a more gentle fire for twelve hours, and it will be a lovely, pleasant and glorious green. Or thus, Take fine Crystal two ounces and an half, Sal Alkali two ounces, flor aris infused in Vinegar and strained one ource, Sal Turrari one ounce and a half; mix and late them into a crucible, and put all in-

to a Glass-makers furnace for twenty four hours, and it will be glorious indeed. Or thus, Take, Crystal ten ounces, Crocus Martis, and Brass twice calqued, of each one pound, mix and melt, them, sturing them well with an Iron rod,

XVIII. An Artifical Sapkire.

To melt Crystal put a little Zaphora (two drachms to a pound of Crystal) then stir it continually from top to bottom with an Iron-hook till it is well mixed, keep it in the Furnace three days, and it is done: yet when it is well coloured, unless it be presently removed from the fire, it will lose its tingure, again.

XIX. Artificial Amber.

Boil Turpentine in an earthen pot, with a little cotton (fome add a little oyl) flirring it till it is as thick as paffe, then put it into what you will and fer it in the Sun eight days, and it will be clear and bard, of which you may make beads, hafts for knives, and the like.

XX. Another way to counterfest Amber.

Take fixteen yolks of Eggs, beat them well with a fpoon; Gum-Arabick two ounces, Cherry-tree Gum an ounce, make the Gums into Powder, and mix them well with the yolks of Eggs; let the Gums melt well, and put them into a pot well leaded, then fer them fix days in the Sun, and they will be hard, and thine like glass; and when you rub them, they will take up a Wheat-ftraw, as other Amber doth.

XXI. To make yellow Amber Soft.

Put yellow Amber into hot melted wax well foum'd, and it will be foft, so that you may make things thereof in what form and fashion you please.

XXII. Another Artificial Amber.

Take whites of Eggs well beaten, put them into a wellel with strong white-wine Vinegar, stop it close, let it stand sourceen days, then dry it in the shade, and it will be like to Amber.

XXIII. A-

XXIII. Another Artificial Amber. 0

Break whites of Eggs with a founge, take off the froth to the rest put Saffron, put all into a glass close stopped, or into a Copper or brazen vetfel, ler it boil in a kettle of water, till it be hard, then take it out and hape it to your liking, lay it in the Sun, and anoint it often with Linfeed-oylmixed with a line Sof fron s, or elfe being taken out of the Kettle, boil ir in Linfeed ovl

XXIV. To make white Enamel. O ...

Take Calx of Lead two ounces, Calx of Fin four ounces, make it into a body with Crystal rivelve ounces, mollitanto round balls, and ferit on a gentle fire for a night, firring it about with an Iron rod, tillit is melted, and it is done. also sale goil , which also

XXV. The general proparations and proportions of Mine-

ral colours.

Plates of Copper must be made red hot, and then quenched in cold-water; of which five or fix grains mixed with Crystal and Sal Warrani Of each half an ounce, and molted, will colour a Sea-green. bon muft be made into a Groous in a reverberatory fire; of which eight or ten grains will tinge the faid ownce of mixture in a yellow of Hyacinth colour. Silver is to be dissolved in Aquaforia and precipitated with ovl of Flints, then dulcifyed with water and dry'd of this five or fix grains to an ounce, gives a mixed colour. Gold minh besdiffolved in Aqua Regis, and precipitated with liquor lof Flints, then sweetned and dry'd 5 of which five or fix grains to one ounce gives a glorious Saphirine colour. Gold melted with Regulas Martis nitrolus five or fix grains to one ounce, gives an incomparable Rubinecolour. Magnesia in powder only ten or twelve grains to one ounce, makes an Amethyst colour. Granafa in powder only ten or fifteen

fifteen grains to one ounce, will tinge the mass into a glorious Smaragdine colour, not unlike to the hatural.

XXVI. Lasto, Common Copper makes a Semprens. Copper of Iton a Grassgreen: Granats, a Smaragdine: Iton, Tellow or Hyacinth: Silvet, White, Tellow, Green, and Granat: Gold, a fair Skie colour: Wismut, a common Blue: Magnesia, an Amethyst colour: Copper and Silvet, an Amethyst colour: Copper and Iron, a pale green: Wismut and Magnesia, a purple colour: Silvet and Magnesia, an Opal, and the like.

XXVII. To make Azare.

Take Sal-Armoniack three ounces, Verdigrife fix ounces, make them into powder, and put them into a glass with water of Tartar, so that it may be somewhat thick, stop the glass and digest in sand in Horse-dung for eight or ten days, and it will be good Azure.

XXVIII. Another way to make good beyond Sea Azare. Beat common Azure with Vinegar, and anoint therewith thin plates of Silver, and put the fame over a vessel full of Urine, which set over hor ashes and coals, moving and stirring it till it looks like good Azure.

XXIX. To foliate Looking-Gluffes.

Take Jupiter and Saturn of each one part; melt them: and forthwith add of good Tin-glass two parts: carefully skim off the Dross, take it from the fire, and before it is cold put to it good Quick-filver ten parts: stir all together, and keep this foliating liquor in a clean new Glass for me. When you use it, strain it from its Dross, throught a cloth.

XXX. To reduce Cryfial, Tatck Flives, &c. into fine Powder.

a. Heat great lumps of Talck red hot, and then cast them into cold water, and they will be immediately reduced into a mealy Calx, snow white. Where note.

note, you must take English Talek, not Venetian, for that will not do. 2. After the same manner may Crossals and Flim be brought in a trice, into a very subtil powder.

XXXI. To reduce Glass into its first principles.

Take bits or powder of Glass, as much as you please; with an equal quantity of the Salt which Glass Men use in making of Glass: melt them together in a strong fire: then dissolve all the melted Moss in warm water; pour off the water, and you shall see no Glass, but sand in the bottom. Thus you see that the fusion of Glass is not the last susion, nor beyond any reduction.

#### CHAP. XXXIII.

The ways and manner of Gilding.

I. To lay Gold on any thing.

Take Red-lead ground fine, temper it with Linfeed-oyl: write with it, and lay Leaf-gold on it, let it dry, and polish it.

Il. To lay Gold on Glafs.

Take Chalk and Red-lead, of each alike, grind them together, and temper them with Linfeed oyl: lay it on, and when it is almost dry, lay Leaf-gold on it; letit dry, then polish it.

III. To gild From with a water.

Take fpring water three pound, Roch-Alum three ounces, Roman Vieriol, Orbinnent, one ounce, Verdigife twenty four grains, Sal gem three ounces, boil all together, and when it begins to boil, put in Tartar and Bay-falt, of each half an ounce; continue the boiling a good while, then take it from the fire,

firike the Iron over therewith, dry it against the fire. and burnish it.

IV. To lay Gold on dron or other Metals.

Take liquid Varnish one pound, oyl of Linseed and Turpentine, of each one ounces, mix them well together: Arike this over any Metal, and afterwards lay on the Gold or Silver, and when it is dry polift ite

No Jo Gild Silver, or Brafs mich Gold mater.

Take Quick-filver two ounces, put it on the fire in a Crucible, and when it begins to Imagk, put into it an Angel of fine Gold; then take it off immediately. for the Gold will be prefently diffolyed: then if it be too thin, strain a part of the Quick-silver from it. through a piece of Fustian: this done, rub the Gold and Quick-filver upon Brass or Silver, and it will cleave unto it, then put the faid Brafs or Silver upon quick coals tillit begin to smoak, then take it from the fire, and scratch it with a hair brush; this do so long till all the Mercury is rubbed as clean off as may be, and the Gold appear of a faint yellow: which colour heighten with Sal-Armoniack, Bole and Verdigrife ground together and tempered with water,

Where note, that before you mild your Metal, you must bail is with Tantar in Bedror water, then foratch it with a

btals were brulban w ment served bus declered, Smords;

and Armour with.

Take Fire-stone in powder, put it into strong red Withervinegar for twenty four hours, boil it in a glazed pot, adding more Vinegar as w evaporates, or hois away: into this water dip your Iron, Steel, &c. and it will be black a dry it, then polith it, and you will have a gold colour underneath. one, illy cod while, then take

VII. Another water to gild Iron with.

Take Salt-peter, Roch-alum burnt; of each half air ounce, Sal-Armoniack an ounce, all being in fine powder, boil with strong Vinegar in a Copper Verfel: with which wet the Iron, oc. then lay on Leaf gold....

VIII. Another water to pild Iron with.

Take Roch-Alum, and grind it with boys Uline. till it is well dissolved, with which anoint the Iron. heat it red-hot in a fire of wood coals; and it will be: like Gold.

IX. To gitd Books.

Take Bole-Armoniack four perly weight, Sugarcandy one peny weight, mix and grind them with glair of Eggs, then on a bound Book, ( while in the press, after it hath been smeared with glair of Eggs, and is dryed) finear the faid composition, let it dry. then rub it well and polish it: then with fair water wet the edges of the Book, and fuddenly lay on the gold, preffing it down with Cotton gently, this done, let it dry, and then polish it exactly with a tooth.

X. Another way of gilding Iron.

Take water three pound. Alum two ounces: Salgem three ounces, Roman Vitriol, Orpiment of each one ounce, flor Aris twenty four grains; boil all with Tartar and Salt as at the third Section.

XL To make Iron of the colour of Gold.

Take Linfeed-ovl three ounces. Tarrar two ounces. volks of Eggs boiled hard and beaten two ounces, Aloes half an ounce, Saffron five grains, Turmerick two grains: boil all in an Earthen veffel, and with the ovl anoint Iron, and it will look like Gold. If there be not Linfeed-oyl enough, you may put in more.

XIL. A Golden lignor to colour Iron, Wood, Glass or

Rones with.

Take a new laid Egg, through a hole at one end take out the white, and fill up the Egg with Quick-filver two parts, Sal-Armoniack finely powdered one part; mix them all together with a Wire or little stick: stop the hole with melted wax, over which put an half Egg-shell: digest in horse-dung for a month, and it will be a fine golden coloured Liquor.

XIII. To gild Silk and Linnen.

Take Glew made of Parchment, lay it on the Linnen, or Silk, &c. gently, that it may not fink: then take Ceruse, Bole and Verdigrise, of each alike, mix and grind them upon a stone: then in a glazed vessel mix it with varnish, which let simper over a small fire, then keep it for use.

XIV. Another of a pure Gold colour.

Take juice of fresh Saffron, or (for want of it) Saffron ground, the best clear Orpiment of each alike: grind them with Goats gall or gall of a Pike (which is better) digest twenty eight days in horse-dung, and it is done.

XV. To gild as Wood or Stone.

Take Bole-Armoniack, Oyl Ben, of each a sufficient quantity; beat and grind them together: with this smear the wood or stone, and when it is almost dry; lay on the Leaf-gold, let it dry, then polish it.

XVI. To gild with Leaf-gold.

Take leaves of gold, and grind them with a few drops of honey, to which add a little gum-water, and it will be excellent to write or paint with.

XVII. To gild Iron or Steel.

Take Tartar one ounce, Vermilion three ounces, Bole-Armoniack, Agna-vite of each two ounces, grind them together with Linfeed oyl, and put thereto Lapis Calaminarie the quantity of a halle-nut; and grind therewith in the end a few drops of varnish;

take

take it off the stone, strain it through a linnen cloth (for it must be as thick as honey) then strike it over Iron or Steel, and let it dry; then lay on your Silver or Gold, and burnish it.

XVIII. To colour Tin or Copper of a gold colour.

Take Linseed-oyl, set it on the fire, scum it, then put in Amber, Aloes Hepatick, of each alike, stir them well together till it wax thick; then take it off, cover it close, and set it in the earth three days: when you use it, strike the Metal all over with it, with a pencil, let it dry, and it will be of a golden colour.

XIX. To gild any Metal.

Take frong Aqua forti, in which dissolve fine Silver, to which put so much Tartar in fine powder, as will make it into paste, with which rub any Metal, and it will look like fine Silver.

XX. To gild fo as it shall not out with any water.

Take Oker calcined, Pumice-stone of each alike, Tartar a little, beat them with Linseed-oyl, and five or fix drops of varnish, strain all through a linnen cloth, with which you may gild.

#### CHAP. XXXIV.

Dying of Paper, Parchment, and Leather, &c.

I. To make Paper waved like Marble.

Take divers oyled colours, put them feverally in drops upon water, and ffir the water lightly: then wet the Paper (being of some thickness) with it, and it will be waved like Marble; dry it in the Sun. II. To write golden Letters on Paper or Parchment.

This may be done by the ninth, tenth and twelfth Sections of the three and thirtieth Chapter of this Book:

Book : or write with Vermillon ground with Gum-Armoniack, ground with glair of Eggs, and it will be like gold.

III. To Take out blots, or make black Letters vanish in

Paper or Parchment

This may be done with Alum-water; of with Aqua fortis mixed with common-water.

IV. To make Situer Letters in Paper or parchiment. Take Tin one otince, Quick-filver two ounces, mix and melt them, and gritted them with Gum-water.

V. To write with freen Ink.

Take Verdigrise, Litharge, Quick-silver, of each a fufficient quantity, grind and mingle them with Urine, and it will be a glorious green like an Eme-

rald to write or paint with.

Or thus, Grind juyce of Rue and Verdigrife with a little Saffron together; and when you would write with it mix it with Gutth-water : On thus, Diffolve Verdigifie in Vittegar, fitam it, then grind it with common water, and a little honey, dry it; then grind it again with gum-water; and it is done.

VI. To write on Paper or Parchment with blew Ink. Grind blew with honey, then temper it with glair

of Eggs or Gunt-water made of Ifing-glass.

VII. To dye Skins Blew.

Take berries of Elder, or Dwarfelder, first boil them, then smear and wash the Skins therewith, and wring them forth: then boil the berries as before, in the diffolution of Alum-water, and wet the Skins in the fame water once or twice, dry them and they wil be very Blew.

VIII. To de Skins into a reddish Colour.

First walk the Skin in water and wring it well: then wet it with the solution of Tartar and Bay-sale in fair water, and wring it again: to the former diffo-

lution.

Chap. 34. Dying of Paper, Parchment, &c. 273

lution, add aftes of Crab-shells, and tub the Skin very well therewith, then wash with common water and wring them out: then wash them with tincture of Madder, in the solution of Tartar, Altim and the aforesaid ashes; and after (if not red enough) with the tincture of Brazil.

IX. Another way to die them Red.

Wash the Skins, and lay them in galls for two hours wring them out, and dip them into a colour made with Ligustrum, Alumand Verdigrise in water. Last-ly, twice dye them with Brazil boiled with Lye.

X. Another way to dye them Blew.

Take the best Indico and steep it in Urine a day, then boil it with Alum, and it will be good. Or, temper the Indico with red Wine, and wash the Skins there, with and all one and wash the Skins there.

XI. To dye Skins Purple Harry VID 1850

Take Roch-alum, diffolve it in warm water, wer the Skins therewith drying, them again; then take rafped Brazil, boilit in water well, then let it cool; do thus thrice: this done, rub the dye over the Skins with your hand, which being dry polish.

XII. To dye Skins of a fad Green.

Take the filings of Iron and Sal-Armoniack of each, alike, steep them in Urine till they be soft, with which besmear the Skin, being stretched out, drying it in the shade, the colour will penetrate and be green on both sides.

XIII. To dye Skins of a pure Skie Colour.

For each Skin take Indico an ounce, put it into boiling water, let it stand one night, then warm it a little, and with a brush-pencil besmear the Skin twice over.

XIV To dye Skins of a pure Yellow.

Take fine Aloes one ounce, Linfeed-oyl two pound, dissolve or melt them, then strain it; besimearing

ing the Skins therewith, being dry, varnish them over.

XV . To dye Skins Green. .

Take Sap-green, Alum-water, of each a sufficient quantity, mix and boil them a little: if you would have the colour darker, add a little Indico.

XVI. To dye Skins Tellow.

Infuse Wold in Vinegar, in which boil a little Alum: Or thus, having dyed them green by the fisteenth Section, dip them in decoction of Privet-berries and Saffron and Alum-water.

XVII. To dye them of an Orange Colour,

Boil Fustick-berries in Alum-water: but for a deep Orange, use Turmerick-root

XVIII. A liquor to gild Skins, Metals, or Glass.

Take Linfeed-oyl three pound, boilit in a glazed veffel till it burns a feather being put into it, then put to it Pitch, Rozin, dry varnish, or Gum-Sandrach, of each eight ounces, Aloes Hepatica four ounces, put all in powder into the oyl, and stir them with a stick, the fire being a little encreased if the liquor is too clear or bright, you may add an ounce or two more of Aloes Soccatrine, and diminish the varnish, so the liquor will be darker and more like Gold. Being boiled, take it, and strain it, and keep it in a Glass for use: which use with a pencil.

Other staining Colours.

XIX. To make a fine blew staining water.

Make a weak Lixivium of Pot-ashes, or take lime water, put into it a sufficient quantity of Florey, and dissolve therein a little Alum, and stir it well over the fire; then take it off, and cast therein Wood Ashes, so will you have a fine blew.

XX. A weaker Blew Staining water.

Take water a sufficient quantity, dissolve therein a sufficient quantity of Florey blew, and a little Alum;

Alum; so will it be of a fainter colour than the former.

XXI. A staining blew water, weaker than the latter. Take pure Well-water a quart: two shells full of Florey blew, mix them well together; and lay them on thin; This is the faintest of all the three.

XXII. A deep green staining water.

Take juyce of the greenest Worts half a pint, firain it through a Cloth, and dissolve therein a fufficient quantity of purified Verdigrise: mix them well together, and it will be a good colour. How to purify Verdigrise see in my Doron, lib. 3. cap. 6. Sect. 13. 6. 2. being so prepared, one ounce will be worth ten of that upprepared.

XXIII. Another green staining colour.

First stain the Leather, Parchment, or Paper, with a Blew, and let it dry: then lay thereon a vellow staining colour, so will the green be much the better.

XXIV. To make a light staining green colour.

Take a pint of Wort made of Malt: and mix therewith a shell full of flory, stiring them well together: first stain with this, then upon this staining, lay yellow, till it grows green : the more of your yellow staining liquor you lay on, the better will your green be.

#### CHAP. XXXV.

Dying Of Wood, Horns and Bones, &c.

O dye Elder, Box, Mulberry-tree, Pear-tree, Nuttree of the colour of Ebony. Steep the wood in Alum-water three or four daves, then then boil it in common oyl, with a little Roman-Vitriol and Sulphur.

Where note, the longer you boil the wood, the blacker it

will be, but too long makes them brittle.

II. To dye Bones green.

Boil the Bones in Alum-water, then take them out, dry them and scrape them; then boil them in Lime-water with a little Verdigrife.

III. To dye Wood like Ebony, according to Glauber. Diftil an Aqua fortis of Salt-peter and Vitriol.

IV. To make Horns black.

Vitriol diffolved in Vinegar and Spirit of Wine will make Horns black: fo the Snow-white Calx of Silver in fair water.

V. To makes Bones white.

They are strangely made white by boiling with water and Lime; continually scumming of it.

VI. To dye Bones green.

Take white Wine vinegar a quart, filings of Copper, Verdigrife, of each three ounces, Rue bruifed one handful, mix them, and put the bones therein for fifteen days.

VII. To dye Wood, Horns, or Bones red.

First boil them in Alum-water, then put them into tincture of Brazil in Alum-water for two or three weeks: or into tincture of Brazil in Milk.

VIII. To dye them Blem.

Having first boiled them in Alum-water, then put them into the diffolution of Indico in Urine.

IX. To dye them green like Emeralds.

Take Agna forcio, and put as much filings of Copper into it, as it will disfolve; then put the Wood, Horns, or Bones therein for a night.

X. To dye Briftles and Feathers.

Boil them in Alum-water, and after, while they are

warm,

warm, put them into tincture of Saffron, if you would have them yellow: or juice of Elder-berries, if blew: or in tincture of Verdigrife, if green.

XI. To die an Azure colour.

Take Roch-alum, filings of Brass, of each two ounces, Fish-glew half an ounce, Vinegar, or fair water a pint, boil it to the consumption of the half.

XII. To Soften Ivory and Bones.

Lay them twelve hours in Aqua fortis, then three days in the juice of Beets, and they will be tender, and you may make of them what you will: To harden them again, lay them in strong white Winevinegar.

XIII. To make Horns foft.

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Take Urine a month old, Quick-lime one pound, calcined Tartar half a pound, Tartar crude, Salt, of each four ounces, mix and boil all together, then strain it twice or thrice, in which put the horns for eight days, and they will be soft.

XIV. Another way to make them foft.

Take ashes of which glass is made, Quick-lime, of each a pound, water a sufficient quantity, boil them till one third part is consumed, then put a feather into it, if the feather peel, it is sodden enough, if not, boil it longer, then clarifie it, and put it out, into which put filings of Horn for two days, anoint your hand with oyl, and work the Horns as it were paste, then make it into what fashion you please,

XV. Another way to Soften Horns.

Take juyce of Marubium, Alexanders, Yarrow, Celandine and Radish roots, with strong Vinegar, mix them, into which put Horns, and digest seven days in horse-dung, then work them as before.

XVI. To east Horns in a mould like as Lead.

Make a Lixivium of calcined Tartar and Quick-T 3 lime, into which put filings or scrapings of Horn, boil them well together, and they will be as it were pap, tinge it of the colour you would have it, and then you may cast it in a mould, and make thereof what fashioned things you please.

XVII. To make Ivory white.

If Ivory be yellow, spotted or coloured, lay it in Quick-lime, pour a little water over it, letting it lye twenty four hours, and it will be fair and white.

#### CHAP. XXXVI.

Of Dying Yarn, Linnen Cloth, and the like.

I. O de a fad Brown.

First insuse the matter to be dyed in a strong tincture of Hermodacts: then in a bag put Sassiron and ashes, stratum super stratum, upon which put water two parts mixed, with Vinegar one part; strain the water and Vinegar through hot, sisteen or sixteen times, in this Lixiviate tincture of Sassiron put what you would dye, letting it lye a night, then take it out, and hang it up to dry without wringing, which do in like manner the second and third times.

II. To dye a blem Colour.

Take Ebulus berries ripe and well dryed, steep them in Vinegar twelve hours, then with your hands rub them, and strain them through a linnen cloth, putting thereto some bruised Verdieer and Alum.

Note, if the blew is to be clear, put more Verditer,

to it.

IH. Another excellent blem Dye.

Take Copper scales one ounce, Vinegar three ounces, Salt one drachm; put all into a Copper vessels, and

and when you would dye, put the faid matter into the tincture of Brazil.

IV. Another excellent blew Dye.

Take calcined Tartar three pugils, unflak'd Lime one pugil, make a Lixivium, and filtrate it; to twelve or fifteen quarts of the same water put Flanders blew one pound, and mix them well: set it to the fire, till you can scarcely endure your hand in it: then first boil what you would dye in Alumwater, then dry it: afterwards dip it in hot Lye twice or thrice; then put it into the Dye.

V. A good red Dye.

Take Brazil in powder, fine Vermilion, of each half an ounce, boil them in Rain-water, with Alum one drachm, boil it till it is half confumed.

VI. Another excellent good red Dye.

Take of the Lixivium of unflak'd Lime one pint, Brazil in powder one ounce, boil to the half; then put to it Alum half an ounce, keep it warm, but not to boil: then dip what you would dye, first in a Lixivium of Red-wine Tartar, let it dry; then put it into the Dye.

VII. Another very good Red,

Take Rosset with Gum-Arabick, boil them a quarter of an hour, strain it: then first boil what you would dye, in Alum-water two hours; after put it into the Dye.

VIII. To make fair Russet Dye,

Take two quarts of water, Brazil one ounce, boil it to a quart; put to it a sufficient quantity of Grains and two drachms of Gum-Arabick.

IX. A good Purple Colour.

Take Myrtle berries two pound, Alum, calcined Brass, of each one ounce, water two quarts, mix them in a Brass Kettle, and boil half an hour, then strain it. X. A Yellow Colour.

Take berries of purging Thorn, gathered about Lammas-day, bruise them, adding a little Alum in powder; then keep all in a Brass vessel.

XI. Another good Yellow.

Put Alum in powder to the Tincture of Saffron in Vinegar.

XII. A very good green Colour.

Take Sap-green, bruise it, put water to it, then add a little Alum, mix and infuse for two or three days.

XIII. To take out Spots.

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Wash the spots with oyl of Tartar per Deliquium. two or three times and they will vanish, then wash with water. Spirit of Wine to wash with is excellent in this case. If they be Ink spots, juice of Limmons or Spirit of Salt is incomparable, washing often and drying it: fo also Castle-sope and Vinegar.

### CHAP. XXXVII.

Of the Dying of Stuffs, Cleaths, and Silks.

O make a substantial blew Dye.

Take Woad one pound, and mix it with four pound of boiling water: infuse it twenty four hours; then dye with it all white colours.

II. To make a firm black Dye.

First Wad it with the former Blew: then take of Galls one pound, water fixty pound; Vitriol three pounds: first boil the Galls and water with the Stuff or Cloath, two hours; then put in the Copperas at a cooler heat for one hour: then take out the Cloath or Stuff and cool it, and put it in for another hour, boiling

it; Lastly, take it out again, cool it, and put it in once

III. To make an excellent Tellow Dyel

Take running water in which wheat bran has been boyled, (being very clear) fixty pound: in which dissolve three pound of Alum: then boil the Stuff or Cloath in it for two hours: after which take Wold two pounds, and boil it till you fee the colour good.

IV. To make a very good green Dye.

First dye the Cloth or Stuff yellow by the third Section, then put it into the blew Dye, in the first Section of this Chapter.

V. To make a pure clear red Dye.

Take liquor or infusion of Brazil in Wheat-bran water, (being strained and made very clear) fixty pounds, Alum two pounds, Tartar one pound; mix and dissolve them, with which boil the Stuff or Cloth for two hours: take it then out, and boil it in fresh Wheat-bran liquor, fixty pounds: to which put Madder three pounds; perfect the colour at a moderate heat, without boiling.

VI. To make a very pleasant Purple Dye.

First dye it blew, by the first rule of this Chapter; then boil it in the former red at the fifth rule hereof: lastly, finish it with a decoction of Brazil.

VII. To dye Crimfon in Grain.

First boil it in the red at the fifth rule of this Chapter; then finish it in a strong tincture of Cochenele made in part Water, part Wine, of in Wheat-bran liquor: Where note, that the vessels in which the Stuff and Liquors are boiled must be lined with Tin, else the colour will be defective. The same observe in Dying of Silks (in each colour) with this Caution, that you give them a much milder heat, and a longer time,

VIII. The Bow-dyers know, that diffolved Tin(that is the folution of *Impiter*) being put into a Kettle to the Alum and Tartar makes the Cloth attract the colour into it. fo that none of the Cochenele is left; but is all drawn out of the water into the Cloth.

The Spirit of Nitre being used with Alum and Tartar, in the first boiling makes a firm ground, so that they shall not foot nor tale their colour by the Sun. Fire, Air, Vine. gar, Wine, Vrine, or Salt-water.

IX. To dye a Red Colour.

Boyl the things, you would dye first, in Alum Water: which take out and boyl in water with Brasil in fine powder. Let it boil till the scum arises first, then put in the thing to be dyed, and let it boy! till the water looks of an Orange rawny, casting in then also a handful of bay falt.

X. To dye a Carnation-Colour.

Take Running water 16 quarts: Pot Ashes 2 pounds; mix and digest 48 hours: this done, divide the water, half into one pot, half into another; let the first pot stand in hot embers, up to the top, or in a furnace, and the other by a fire, to fill up the first as it boils away: Into the first put Red Brisco flocks 2 pounds, letting it boil till it is thick, adding Gum-Arabick, and Alum, of each the quantity of a Walnut; diminish the heat, and let it be only scalding hot, then put in the matter you would dye, letting it lye 24 hours in the liquor.

XI. To dye a purple Colour.

Take Orchall, mix it with half Urine, and let it boil till it be of a dark colour; then pur in the matter you would dye, letting it lye 24 hours or more.

XII. To dye a dark Green Colour.

First dye the matter you would have of a dark Green, Green, blew, by the first section of this Chapter: then put it into the yellow dye at the third section aforegoing, and it will be of a dark Green Colour.

XIII To dye a Popping-jay Green colour.

Make a Weak Lixivium of Pot-Ashes, or lye such as the Country people wash their cloths with, put into it Indico, a sufficient quantity, then put in your matter to be dyed, (being first dyed yellow) and let it boyl (the longer the better) so will the colour be good.

XIV. To dye a good yellow Colour.

Take Running water, and wort made of Malt, of each a like quantity, in which dissolve a sufficient quantity of Alum by boiling: Into this liquor put what you would have dyed yellow, and let it boil a good while; then take it out, and put it into a decoction of Wold, Weld, or dyers weed, made with Chalk water, and (laying weights upon it, ) let it boyl an hour or two.

XV. To dye a Ruffet Colour.

Take Vitriol of Iron, or common Green Vitriol (fuch as they usually make Ink of, nut galls, of each a sufficient quantity, beat them into powder, and boil them in Running water, then put in the matter you would dye, and let it lye 24 hours.

XVI. To dye an Orange Tawney Colour.

Make a Weak Lixivium of Pot-Ashes, or such as Women wash their cloth with all: put into it a sufficient quantity of Wood soot, and black Cork; boil a while, then put in the matter you would dye (being first dyed yellow), and let it boil a little, casting in while it boils, a handful of bay-salt.

XVII. To dye a brown Tawney or Iron rust Colour.
Make a strong decoction of Wallnut tree leaves

in fair water; then put in the matter you would dye, and boil it some hours, with the leaves, in the faid liquor; and when it comes out, it will be exactly of

the colour you defire.

XVIII. To enumerate all the great variety of Dyes. or Colours, or offer at an essay to reduce them to a certain method, as it is a labour needless, so it is as altogether impossible, there being infinite colours to be produced, for which (as yet) we have no certain. known or real name: And out of what we have already enumerated in this Chapter, the ingenious (if they please) shall find (by little Practice and Experience) fuch great variety to be apparent, that should we express the number though but in a very low or mean degree, we could not but be exposed in censure to an Hyperbole even of the highest! Every of the aforegoing colours, will alone or fingly, produce a great number of others, the first more deep or high; the latter, all of them paler than each other: And according to the variety of colours the matter is of. before it is put into the Dye, such new variety also shall you have again when it comes out; not according to what the colour naturally gives, but another clean contrary to what you (although an Artist) may expect. For if strange colours be dipt into Dyes not natural to them, they produce a forced colour of a new texture, fuch as cannot possibly be preconceived by the mind of man, although long and continued experience might much help in that case. And if such variety may be produced by any one of those fingle colours; what number in reason might be the ultimate of any two or three or more of them being complicate or compounded? Now if fuch great numbers or varieties may be produced, r. By any one single colour, 2. By being complicate; how should we (with-

out

out a certain and determinate limitation by denomination or name) ever order fuch confused, unknown, various, and undeterminate species of things, in any pleasant, intelligible method? Since therefore that the matter (as yet) appears not only hard, but also impossible we shall commend what we have done to the Ingenuity of the Industrious; and desire that Candor or Favour from the Experienced, with love to correct our Errors; which act or kindness will not only be a future obligation to the Author, but also enforce Posterity to acknowledge the same.

# olofo most av CHAP. XXXVIII.

Of Wax-work, or Moulding.

I To make the moulds.

Take a large piece of Plaster of Paris, burn it in a Crucible till it be red hot, let it cool, beat it very fine, and fearfe it; taking heed that the wind and Air come as little at it as may be, for that will hinder its hardening; then keep it close up in wooden boxes or in thick brown paper. Take an earthen vessel that is shallow, put into it almost half a pint of fair water: then prepare the fruit you would imitate, and bind a Rag round it like a cord in a wreath long ways on the fruit: after take some linfeed Oyl or Oyl of fweet Almonds which is better, with which, befmear(by help of a pencil) the Lemon, Orange, Apple, Pear, Plum, Pomgranate, Walnut, &c. you would pattern on the one fide, which lay uppermost; your fruit thus prepared; take some of your fifted plaster of Paris, and temper it in the aforementioned water to a just thickness; and as speedly

freedily as may be, with the help of a Spoon, cast it on the Oyled Limon, laying it on very thick, left the thinnels of the Mould should spoil the work; when it is hardened ( which will be in a little time ) take away your Rag, leaving the Limon still fast in its half Mould, which done turn the hardned fide downward; then Ovl the other half of the Limon together, with the edges of the Mould which the rag did cover; wash the Vessel where the former Plaster was, and put into it more Plaster of Paris as before. making it not too thick, and put it upon this other fide of the Limon or Fruit, as before; which when done and hardned, make a notch that both halfs may fall, one exactly into the other then tye them close together (having first oyled them) and keep them for use.

II. To cast in these Moulds.

The Moulds being made of Plaster of Park, or burnt Alabaster as aforesaid, by mixing with fair water; put into the same the whitest and purest Virgin Wax melted, shaking the mould every way, exactly and nimbly; which being cold, take it out of the Mould, by taking the parts as under this Wax fruit may be coloured by the following Rules; except you exactly colour the wax before hand.

III. To Colour the Wax according to your defire.

1. For Raddiffes, The ground is Ceruse, which must be painted over with Lake: the top of the Raddish with Verdigrise: these must be tempered with Gum-Arabick water.

2. If the fruit be all of a colour as a Limon, 'tis easy to colour the Wax, and cast it all of a colour: this is done, by putting a little linnen bag of that colour you use, into the hot melted Wax, the colour being made first very fine. 3. For Lemons

or Apricoeks, put only Turmerick in a bag. 4. For Oranges, Turmerick and Red-lead well tempered. 5. For Apples, Pears or Grapes, Turmerick and a little Verdigrife. 6. For Walnuts, and Figgs, Turmerick with English Oker, and Umber, all in a bag together. 7. For Cucumbers, Artichoaks, Peascods, Filberds, Turmerick, Verdigrife, Ceruse, and Eggs, all put in several bags, and steept into the Virgin Wax being well melted. 8. For Damsons, brusse Charcole, Indico, and blew Starch, in a bag together. 9. For a slesh colour, white-lead, mixt with Vermillion, &c.

IV. To counterfeit Rock candied freet meats.

Take Venice Glass beaten to what smallness best likes you, or may be most fit to serve your occasion: then daub over some Wax, or cast sweet means with thick Gum-Arabick water, and strew the aforesaid Glass powder thereon, and it will much fatisfie your expectation.

V. To take the Idea of any Embolied work

About the edge of the Embofied work make a little ledge or border of Clay: then lightly, but carefully anoint, the furface of the Embofied matter and Clay with oyl, (but have a care it be not too much, left it hurt the figure) upon which but to the thickness of half an inch or more of Platter of Paris, or calcin'd Alabafter, mixt with water to the thickness of Honey; and in a quarter of an hour, growing hard, take it off, and you shall have the perfect Idea of your Imbofied work broom administration and a most over the most and a local and a most over the most of the local and a local an

religious in Land, who professor a receife the

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Ans of Drawing, I shing, and Engage

CHAP.

# CHAP XXXIX.

or Applicates tilt culty Torinerick in a beg. ..

## The way of Performing of Mezo-tinto.

I. TAke a well polished Copper plate, which make all over rough one way, with an engine particularly designed for this purpose; then cross it over with the Engine again; and if you fee occasion cross it over again the third time, till it be made all over rough alike wiz so as if it were to be printed it would print black all over.

II. This done, take Charcole, black Chalk, or black Lead, to rub over the plate, and draw your defigns with white Chalk upon the fame, then take a tharp Stiff, and trace out the out-lines of the defign

which you drew with the white Chalk.

III. Where you would have the light strike strongest, take a burnisher, and burnish that part of the Plate, as clean and fmooth, as it was when it was fully anome, the furface of the lamboffe beddilog flaid

IV. Where you would have the light fainter; there you must not polish it so much and after this manner you must either increase or decrease the light in your defign, making it either; fainter, or stronger; as the necessity of your work shall require a venoH lo

V. The shape or form of the Engin or Instrument is various and mainifold, according to the fancy of the Artist; those that desire them, may have them of feveral persons in London, who profess and practise the Arts of Drawing, Etching, and Engraving.

CHAP

# Chap.40.

# Wine (as you would have it in freezeth ) two her

twenty Gallons put a pint or quart of the best failt

# and Eggs, and a Axet of batth & Allicant well become together. Let it france in a Collect as other Wines, will it is it memirated the training of the contract 
To make at Artificia

I O make Artificial flesholls and waste

Long Take crumbs of the best wheaten Bread, as foon asit comes forth out of the Oven, being very hot, and as much as you pleases put it into a bolt head of Glass, ( without any other mouture than what is in the bread it felf.) which prefently feal up hermetically. Then fet it in digestion in a temperate Balneon the fpace of two months, and it will be turned into a fibrous Fleshi This being exalted to a higher perfection by the rules of Art, you may eafily fee how great a nourisher and restorative wheat is, and what an excellent medicine may be made of

II. To make an Artificial Mallago Wine. D noguito

Take a wine Veffel well hoopt with Iron hoops, and one end open, to which a close cover, must be fitted to take on and off at pleasure, set it in a warm place, fill it full of fair water, to every gallon of which put two pounds of Mallago Raifons, first bruised in a stone Mortar; and to every twenty gallons of water a good handful of Calx Vive: cover the Vessel close, and keep it warm with cloths: let it stand four or five days : to work : then fee if the Raisons berifenup, and beat them down, and cover it again as before, beating them down every fourth or fifth day for three or four weeks: then put a tap in, four inches above the bottom, and fee if it taffs like wine; if not, let it stand a while longer; after which draw it off into another. Wine Vessel, and to every twenty

twenty Gallons put a pint or quart of the best spirit of Wine (as you would have it in strength) two new laid Eggs, and a quart or better of Allicant well beaten together. Let it stand in a Cellar as other Wine till it is sine, and fit to be drunk.

III. To make an Artificial Claret.

Take Water fix Gallons choice Cider two Gallons; bell Mallago Raifons broiled eight poundst mix and let them fland all in a warm place fourtien days, flirring them well once every day. Then profs out the Raifons, and put the liquor into the Vellel again, to which add juice of Raif-Berries a quart: juice of black cherries a pinter place of black betties a pint and a half: cover this liquor with bread fintead thick with from Muffard, the Muffard fide being downwards, and for let it work by the fire three or four days; affer which tunitum, let infland a week, and bottle it up so will be become a very brisk and pleasant drink, and say better and wholsomer than our common Clarer.

IV. Tomake an Artificial Malmor.

Take eight Gallons of spring water: English Honey two Gallons: make them boyl over a gentle fire for an hour: take it off, and when it is gold, put it into a Runlet, hanging in the Vessel a bag of spices, and set it in the Cellar for half a year, at the end of which you may drink it.

V. To make Rasp-borry Wine.

Take Canary a Gallow: Rasp-berries a Gallons: mix and digestive hours afrain them out and add Rasisons of the Sun stoned three pounds: digest again four or five days, sometimes stirring them together: then pour off the clearest, and put it up into hottles, which put into a cold place: if it be not sweet emough you may duscify it with Sugar.

VI. Another

froin

VI. Another may to do the Same.

Take juice of Raipbernes, bottle it up close, and fer it in Cellar, and it will become clear, and keep all the year long, and be very fragrant, a few spoonfuls of this put into a pint of Wine sweetned with Sugar, will give it a full tast of the berry: two or three ounces of the syrup of the juice will do the same.

VII. To parify Oyl Olive, that it may be eaten with

pleafure.

Take fair water a quarts; Oyl Olive a pint this; and fliake them well together for a quarter of an hour in a glass; then separate the water from the Oyl with a separating sunnel. Do this four or five times or more as you see occasion; till the Oyl becomes very pure: and the last time wash it with Rose-water, then hang in the midst of the Oyl a course bag full of bruised Nurmegs, Cloves, and Cinnamon, so will you give it an excellent taste.

VIII. To purify Butter, and make it of a most fineet tast.

Melt Butter with a flow fire in a well glazed earthen Vessel, which put to fair water, working them well together and when it is cold take away the Curds and the Whey at the bottom. Do it again the second time; and if you so please the third time in Rosewater, always working them very well together. The Butter thus clarified will be as sweet in taste, as the marrow of any Beast, and keep a long time, by reason of the great impurity which is removed by this

IX. To make Suge, Parfley or Pennyrojal Butter:
When the Butter is newly made, and well wrought from its Water, Milk, and Wheyish part; mix therewith a little Oyl of Sage or Parfley, so much till the Butter is strong enough in tast to your liking, and then temper them well together: this will excuse your

means; the drofs being near a quarter of the whole.

from eating the Plants therewith: and if you do this with the aforefaid Clarified Butter, it will be far better, and a most admirable rari-

X To purify and refine sugar. In a ftrong Lixivium of Calx Vive diffolve as much course Sugar as it will bear, adding to every quart of liquor, 2 whites of Eggs, beaten into Glair, thir them well together, and make them boyl a little, taking off the skum, as long as any will arise: then pass all through a great woollen cloth bag, so the fæces will remain behind in the bag, then boyl the liquor again so long till being dropt upon a cold plate, being cold, it is as hard as Salt: this done, put it out into Pots or Moulds for that purpole, having a hole in the narrower end thereof, which must be stopt for one night, afterwards being opened, the Molloss or Treacle will drop forth: then cover the ends of the pots with Potters Clay, and as that Clay finks down, by reason of the finking of the Sugar, fill them up with more Clay, doing thus, till the Sugar will fink no more. Lastly take it out, and being hard and dry, bind it up in papers.

XL. To make a Vegetable grow more glorious than its

Species.

Reduce any Vegetable into its 3 first principles, and then joyn them together again, being well purified: put the same into a rich earth, and you shall have it produce a Vegetable far more glorious, than any of its species.

XII. To make a Plant grow in two or three bours.

Take ashes of Moss, which moisten with the juice of an old dunghil (being pressed out and strained) then dry them a little, and moisten them as before; do this four or five times: put this mixture not being

Lib.III-

very dry, nor-very moist into an earthen Vessel. and in it fer feeds of Lettice, Purlane, or Parfley (for they will grow fooner than other Seeds ) being first impregnated with the effence of a vegetable of its own species (some say the juice of the same Plant, but especially the spirit will do instead of the Elfence:) till they begin to sprout forth: which then put into the faid earth, with that end upwards which firings. Put the Veriel into a gentle heat, and when it begins to dry, more it with the faid juice of dung: This may you have a Sallet while supper is making ready.

XIII. To reduce a whole Vegetable into a liquor which

may be called the effence thereof.

Take the whole plant with Flowers and Roots. bruife them in a Morter, put all into a large glass Veffel, (but a Wooden one is better) fo that two of three parts may be empty; cover it exceeding close, and let it stand in putrefaction in a moderate hear for a year, and it will all be turned into a wa-

XIV. To make the lively form and Idea of any Plant ap-

pear in a Glass.

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Take the former water (at Sect. 13) distill it in a good Glass in ashes, and there will come forth a Water and Oyl, and in the upper part of the Vessel a volatile Salt: the Oyl feparate and keep by it felf: with the water diffolve the volatile Salt, and purify it by filtering and coagulating. This purified Salt imbibe with the faid Oyl until it will imbibe no more; digeft them well together for a month in a Veffel hermetically fealed; fo will you have a most subtil essence, which being held over a gentle heat, or the flame of a candle, by which means it may be made hot, you will fee the fine fubstance ( which is 11 3 like

like impalpable Alhes of Salt ) fend forth from the bottom of the Glais, the manifest form and Idea of the vegetable, vegetating and growing by little and little, and putting on to fully the form of Stalks, Leaves, and Flowers, in fuch perfect and natural wife, that one would believe the tame to be real; when as in truth it is the spiritual Idea, arthing with the spiritual Effence of the Plant; this were it owned with its proper earth, would take to it self a more solid body. Now as shon as the Vessel of Glais is removed from the fire, this Idea or representation vanishes, becoming a Chaos and consused matter, returning to its sediment, from whence it arole.

XV. Another way to make the effence of a Plant.

Put the Herbs, Flowers, Seeds, Spices, &c., into rectified fipirit of Wine: extract a very firong and deep fincture; upon which put firong Cyl of Salt, and digeft in Bales, till an cyl fwim above, which separate. Or else thraw off the fibrit of Wine in Bales, and the Cyl of Essence will remain at bottom; but before the spirit of Wine is abstracted, the Cyl or Essence is blood red, and a rine Countessence.

XVI. Another way to make the true Effence, or rather

Quinteffence.

Make the Water, Oyl, and Volatile Salt, as before is taught; and from the faces extract the fixed Salt, which purify according to Art; which Salt refolve in a Cellar upon a marble flore to an Oyl, which is that we call per deliquion, filter it and evaporate, till the Salt is white as Snow, with these Salts imbibe as much of the Oyl as you can make it receive; then digest till the Oyl will not separate from the Salt, but become a fixed powder, melting with an easy heat.

Myll Timele the form of a kine tree appear in Galaphonia. Distill Turpentine in a Retort gradutin: When all is distilled off, keep the Retort still in a reasonable best, that what humidity is still remaining may be evaporated, and it become dry. Take in then off from the fire, and hold your hand to the bottom of the Retort, and the Turpentine which is dryed, called also Colophonia of Rosin; will crack alunder in several places and in those cracks, or Chaps, you still see the persist figure of First trees, which will there continue many months.

XVIII. To make Harry book seemingly grows in a Glass.

Take Harrs harn broken into simall birs, and pue them into a Glass Retorn to be diffilled, and you shall be the Glass to be seemingly full of flores, which will continue there so long will the Volatile.

Salt in the Line and Soraydamon ad that

effd suring s

XIX ale Excellent inversion to make a pleasait. Fire, Take of the best New Castle Coals 3 parts beaten finall; Learn one Part i mine them well together into a Mass with water, of which make Balls, and dry them persovell. This fipe is durable, sweet, and the offensive by reason of the small or Ginders, as other Coal fues are, but burns as well in a Chamber as charoost in self. And this Fire may sever for such distillations as require a strong and lasting hear, as also for ordinary occasions.

XX. To make a duriable and lafting Oyl.

1. Take millaked lime, Bay-falt, Oyl Olive, of each a like quantity, mix them well together, and dillill in fand: Cohohate the Oyl upon the fame quantity of fresh lime and salt: this doe 4 times. 2. The Oyl by this means will be clear, and impregnated with what salt was Wolatile in the lime and salt. 3. If it be seven times distilled, it will be as pure, odoristeven times distilled, it will be as pure, odoristeven.

ferous, and fubtil, as many distilled Oyls of Vogetables. 4. This Ovl whilf a distilling, has a most fragrant finell, and of a most durable quality, which duras bility comes from the faline impregnation belides which it is good against any invererate Ach or pain in the limbs; or other parts. The Lamp made with this Oyl, willburn fix or feven times as long, as that which is made with other Over also it burns very fweet i 6. You ought to be very cautions in making of it, or elfe your Glasses will quickly break. 7. You must rake very strong lime, such as your dyers use, and call County to the of I

Timbe Tomake a Candle that that last long !

Miss with your Fallow unflaked Lime in powder. Or make voilir Candles of Caftle-foape fuch Candles as these will be admirable for Lamp Burnaces. Now it is the Salt in the Lime and Soaps that preferves the Tatlow from burning out to fail, as otherwise it Take of the belt New Caffle Coals spare, bluow

XXII. To make the diffitled tist out of any Herb; Soed Flower br Paper lin attroment, without a Furnace. 6 Citi

Moumble have a long pine mide of Thrush To bacco-pipe clay with a hole in it as big as at small Walland three or four inches from one end of it, into which you must put the matter, you would have the Oyl of fet it on fire with a Candle opa Coal ! then put one end of the pipe into a bason of fair was ter, and blow at the other end, fo will the finoak come into the water, and the Ovi will fwim upon it. which you may feparace with a Funnel which a

XXIII. To reduce Rofin into Turpentine again. :

Take Oyl of Turpentine and the Colophonia, or Rofin thereof, in powder mix thefe together, and digest them; and you shall have Turpentine of the fame confiftency it was before that of a more Last V Free hery Chap. 40. Certain natural Experiments. 297

fiery and subtil nature: Pills made hereof are more excellent for opening obstructions of the Breast, Lungs, Kidneys, Bowels, &c. than those that are made of raw Turpentine.

XXIV. To write or engrave upon an Egg, Pibble,

Flist &cc.

Write what you please with Wax or Grease upon an Egg, Pibble, Flint, &c. then put it into the strongest spirit of Vinegar, or oyl of Salt, letting it lye two or three days: and you shall see every place about the Letters or Writing, eaten or consumed away; but the place where the Wax or Grease was not at all touched:

XXV. To make a powder, which being wetted shall be

kimiled.

1. Take a Load-stone, powder it, and put it into a ftrong Crucibles cover it all over with a powder made of Calx vive and Colophonia, of each a like quantity; put also some of this powder under it: when the Crucible is full, cover it, and lute the clofures with Potters Earth, put it into a Purnace, and there let it boy! after take it out, and put the macter into another Crucible, and fer it in a Furnace alfor this do till it becomes a very white and dry Calk. 2. Take of this Calx one part: Sal Niter well purified four parts: and as much Camphire, Sulphur vive, oyl of Turpentine and Tartar: Grind what is to be ground to a subtil powder, and put all into a glass Vessel, with as much well rectified spirit of Wine, as will cover them two inches over. 3. Stop the Veffel close up, and fet it in Horse dung three months, so will all the matter become an uniform paste: evaporate all the humidity, until the whole Mass becomes a very dry stone; which take out, powder it, and keep it very dry. 4. If you take a little

little of this powder, and spir upon it, or pour some water thereon, it will take fire prefently, to that you may light a match, or any fuch thing by it.

XXVI. To make a Room feem to be on fine.
Take rectified spirit of Wine, and diffoly? Cemphire therein; evaporate this in a very close Chamher, where no Air can get in; and he that first/enters the Chamber with a lighted Candle, will be amazed; for the Chamber will form to be full of fire, and very inbril, but of little continuance. This done in a close Cupboard or Press will be much more peripicuous and vilible.

XXVII. To make the four Elements appear in a Glass.

Take Jet in fine powder an ounce and half: Quene Tarrari per deliquiam (made without addition of any water) two ounces, coloured with a light Green with Verdigrife: add thereto spirit of Wine tinged with a light blew with Indico, two ounces; of the best recuired spirit of Turpentine, tinged of a light red with Madder, two ounces: mix all these in a Glass, and shake them together, and you shall see she heavy black Jer fall to the bottom, and represent the Farth next the oyl of Tarter made assent falls, representing the water: Upon that swims the blew spirit of Wine, representing the Air or Sky: And uppermost of all will fwim the subtil red on of Turpentine representing the element of fire. It is frange to fee how after shaking all these together, they will be distinctly separated one from another. If it he well done, (asicis easy to do) it is an admirable and glorious fight.

XXVIII. To represent the whole World in a Glass. Take the finest Sal-Niter, what you please; Tin, half to much: mix them well together, and calcine them thent Hermetically; then pur them into a Retort to which adjoin a Glass Receiver, with leaves of Gold out into the bottom thereof, dute them well together; put fire to the Recort, until vapours affe that will cleave to the Gold angment the fire all no more fumes afcend, then take away the Receiver, close it hermetically, and make a Lamp fire under it; and you will fee represented in it, the Sun, Moon, Stars, Fountains, Trees, Herbs, Plants, Flowers, Fruits, and indeed, even all things, after a very wonderful manner.

XXIX. To make a perpetual motion in a Glass.

Take Quickfilver, Tin, and leven ounces: pure Sublimate fourteen ounces, dissolved in a Cellar upon a Marble, (which in four days will become like Oyl Olive) mix and distill in fand, and there will Sublime a dry Substance: put the water which distills off, back upon the Earth in the bottom of the Stillatory, and dissolve what you can: filter it, and distill it again, and this do four or five times, then will that earth be so subtill, that being put into a Vial, the subtill Atoms thereof will move up and down for ever: but you must be sure to keep the Glass close stopt, and in a dry place.

XXX. To make Regulus of Antimony, for Antimonial

Take Antimony in powder, Niter, of each a pound: crude Tartar in fine powder two pounds: mix, put them into a Crucible, cover the Crucible, and melt, so will the Regular fall to the bottom, which pour into a brass Mortar smeared with Oyl. Take Antimony powdered two pounds: crude Tartar in powder four pounds: melt as before. This Regulus you may cast into Cups, Pictures, Medals, or what figures you please: these insused in two

or three ounces of Wine in an earthen glazed Veffel. or in a Glass, in a gentle heat all night, gives you a liquor in the morning which will vomit; Dose from two drams to two ounces and a half; you may fweeten it if you please with a little white Sugar. These Cups or Pictures will last for ever, and be as effechial after a thousand times Infusion as at first.

and you will be represented in its the San. Moon Mans, Foundament Proces Henry Proces Floreers, I ribe, and indeed evenall things, atter a very

fells oil, back upon the Earth in the borrow of the Libri Tertii F IN 15. and a same of the first of the same of the

Visla the fabrill Arran thereof will investo and down for ever: But you must be tall a list o the

aire, our thea by it Chaible, our rate Oncible, and melt, to said to the said fill to the bottom:

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N. T. To make a programal mules be a Galf. Omedantes, Valla, and the con-Saldinine longen entires, diffolyco in a Calarura on themps ( which is four dropers) and all the Ovi Olive) mix and diffill in that, and there will tabline à dry fablicace pur the voir which de-

Chirciole hope - a dary place of delinent ! Makel: crude Tar ... I fine power ... o peak as

# POLYGRAPHICES

# LIBER QUARTUS.

Containing the Original, Advancement and Perfection of the Art of Painting: Particularly exemplified in the Various Paintings of the Ancients.

## CHAP. I.

Of the Original of these Arts.

HE Original of the Art of Painting was taken from the Forms of things which do appear; expressing the same (as Hidorus Pelusiota saith) with proper colours, imitating the Life, either hollow or swelling, dark or light, hard or soft, rough or smooth, new or old.

Of such things (amongst Vegetables) Flowers, yield the greatest variety: of Animals, Man: of things Inanimate, Landskips, etc. For this matter of imitation was presented in the chief things only, for who should learn to imitate all things in Nature? the greater being attained, the lesser will follow of themselves; if any shall attempt to great a burthen, two inconveniencies, saith Quintilian, will necessarily follow, to wit, Always to say somewhand yet never to say all.

II. And this imitusion of things fees with the Eye, was much helped by the Idea's of things conceived in the mind,

from the continual motion of the imagination.

Wherefore as Quintilian faith (tib. 10, cap. 3, of his Institutions of Oratory ) "We shall do well to accidence our minds to fuch a stadfast constancy of " conceiving, as to overcome all other immediments "by the earnelmess of our intention, for if we do " altogether bend this intention upon things concei-"ved, our mind need nevertake notice of any thing "which the Eye fees, or the Ear hears. And therefore those which would profit much, must take care and pains to furnish their minds with all forts of useful Images and Idea's. "This treasury of the mind " ( faith Cassiodorn cap. 12. de Anima ) is not over-" loaden in haste: if it be once furnished, the Artist " shall find upon any sudden occasion, all things ne-"ceffary, ready at hand; whereas those which are "unprovided shall be to seek It is like to the Analytical Furniture in Algebra, without the knowledge of which no notable thing can be performed. Now akhough the imagination may be easily moved, yet this famio excellency is not attained in an inflant : And without the ability of expressing of the conceived Images, all the exercise of the fancy is worth nothing. III. Thele

IH: Thefe Forms and Idea's were not fingly confidered but

complicately.

For whereas nature feareely ever represents any one thing perfect in betury (in all its parts) left it should be faid, that the had nothing more to distribute to others: So Artiffs of old chose out many Patterns. which were absolutely perfect in some of their pares, that by defigning each part after that Pattern, which was perfect therein, they might at last present something perfect in the whole. And fo when Zenzis intended an exquisite Pattern of a beautiful woman, he fonghenot for this perfection in one particular body, but chose five of the most well-favoured Virgins that he might find in them that perfect beauty, which (as Lucianfaith) must of necessity be but one. And Miximus Tyrins faith, you shall not find in haft a body so accurately exact, as to compare it with the beauty of a Seame. And Proche faith, if you take a man brought forth by nature, and another made by Art of Carring, that by nature thall not feem the flatelier. because Art doth many things more exactly: To which Ovid affents, when that he faith that Pygmalion did carve the Snow-white Image of Ivory, with such a happy dexterity, that it was altogether Impossible that fuch a woman should be born.

IV. From this manner of Imitation did arife the skill of designing; from whence spring the Arts of Painting, Liaming, Washing, Casting, and all others of that

kind

Thele Arts in their infancy, were so mean, that the find Artist was forced (as Alianus faith lib. 10. cap. 20. of his History) in Painting to write, This is an On, this a Horse, this a Dog: But as Tully saith (in libro de charie or attoribus) there is nothing both invented and finished at a time. And Arnobius in libro secundo adversus

"with our minds, brought forth out of the heavenly places; but are all found out here on earth, and in process of time, softned, forged, and beautified, by a continual meditation. Our poor and needy life, perceiving some casual things to fall out prosperously, whilest it doth imitate, attempt, try; slip, reform, and change, hath out of the same assiduous reprehension made up some small pieces of Arts, the which it bath afterwards by study brought to some perfection.

V. The persons who were the first inventers of these Arts are scarcely known (because daily new inventions were added) but those samous Persons who either strove to bring them to persection, or add to what was already invented, or otherwise were samous in any one particular thing, History

bas in part informed us of.

The famous Pansas was the first that attempted to bring the Art of Painting to perfection. Apeller was the first that undertook the expressing of invisible things, as Thunder, Lightning, and the like; the which confideration of these almost impossibilities. made Theophylactus Simocatus (in Epift. 37.) fay, that Painters undertake to express fuch things, as nature is not able to do: And the same Apelles had a certain invention and grace, proper to himself alone to which never any other Artificer ever attained. And although Zenxis, Apelles, Aglaophon, did none of them feem to lack any thing of, yet they differed very much. and had each of them some peculiar excellency, of which neither of the other two could boast. Here is but one Art of Casting, in which Myron, Polycletas, Lylippus have been excellent, yet did One very much differ from another : Zeuxis did surpass all other Arrizans in Painting womens bodies: Lyppus is most excellent in

in fine and subtile workmanship: Polycletus made excellent Statues upon one Leg: Samius did excel in conceiving of Visions and Phantasies: Dionysius in Painting of men only: Polignotus most rarely expresfed the affections and paffions of men: Antimochus made noble women: Nicias excellent in Painting of women, but most excellent in four footed creatures, chiefly Dogs: Calamis made Chariots, with two or four horses; the horses were so excellent and exact. that there was no place left for Emulation: Euphranor, the first and most excellent in expressing the dignity, and marks of Heroical Persons; Arestodemus painted Wrestlers: Serapion was most excellent in Scenes: Preicus (inferiour in the Art of Painting to none) painted nothing but Coblers and Barbers: Ludio the first and most excellent in Painting Landskips: Apollodorus, Asclepiodorus Androbulus, Alevas, Were the only Painters of Philosophers, &c.

VI. Another reason of the Invention hereof, was from the

moving of the passions.

For as Simonides saith (comparing Painting with Poesy) Picture is a silent Poesy, and Poesy is a speaking Picture: Upon the occasion of these words, Plutarch saith, The things represented by Painters, as if they were as yet doing, are propounded by Orators as done already: Painters express in colours and lines, what Poets do in words; the one doth that with the Pencil, which the other doth with the Pen. When Latinus Pacatus had made a full description of the miserable end of the wicked Maximus, he calls upon all the Painters to assist him. Bring hither, bring hither you pious Poets (saith he) the whole care and study of your tedious nights: Ye Artisicers also, despite the vulgar Argument of Ancient Fables; these, these things deferve better to be drawn by your cunning hands the

the Market-places and Temples be filled with such Spectacles; work them out in Ivory; let them live in colours; let them stand in Brass; let them exceed the price of precious Stones. It doth concern the security of all Ages, that such things might be seen to have been done, if by chance, any one filled with wicked delires, might drink in innocency by his Eyes when he shall see the (horrid and deplorable) Monuments of these our times. And Gregory Nysen, upon the Sacrificing of Isaac saith, I often saw in a Pitture the Image of this Fast, upon which I could not look without tears; so lively did Art put the History before my Eyes.

VII. The Egyptians were the first inventers of Painting: The Greeks brought it (out of its rudeness) to proportion: The Romans adorned it with colours: The Germans (following them) made their works more durable by painting in Oyl: of whom the English, Dutch, Italian, and French,

are become imitators.

It is reported that the Grecians were the first painters, and that their colours were (in the infancy thereof ) only white and black: but it appears more with reason and truth, that the invention thereof should be ascribed to the Egyptians, who before the invention of Letters ) fignified their conceptions by Hieroglyphicks of Figures, Cyphers, Characters, and Pictures of divers things, as Birds, Beafts, Infects, Fiftes, Trees. Plants, and the like, which by Tradition they transfer'd to their Children; fo they made the Falcon to fignifie Diligence, Strength, and Swiftness: the Bee a King; its Honey, Mildness; its Sting, Justice; a Serpent (tail in mouth) the revolution of the Year: the Eagle, Envy; the Earth, a labouring Beaft; a Hare, Hearing, &c. Now our bare learning to imitate is not enough; it is requifite that fince we are not first in invention, invention, we should study rather to outgo than to follow. If it were unlawful (faith Quintilian ) to add any thing to things invented, or to find out better things, our continual labour would be good for nothing; for it is certain that Phydias and Apelles, have brought many things to light, which their Predecessors knew nothing of. Apelles did all things with compleatness, Zeuxis, with an inestimable grace: Protogenes with an indefatigable diligence: Timanthes with a great deal of subtilty and curiofity: Nicophanes with a a stately magnificence. Now to attain to these kind of Excellencies, it is necesfary to have recourse to variety of great Masters, that fomething out of the one, and fomething out of the other, may be as so many ornaments to adorn our works; and as fo many steps to lead us on to the door of perfection.

VIII About the time of Philip King of Macedon, this Art began to flourish: growing into great estimation in the days of Alexander and his Successors: from thence through all the series of time even to this day, it hath received by degrees, such wonderful advancements that it may be now

said, it is arrived at perfection.

For without doubt there is a perfection of Art to be attained, and it is as possible that I or thou, or he, may as well attain it, as any body else, if we resolve to strive, and take pains, without fainting, or fear of despair. And since the Art of Painting is (as Socrates faith) the resemblance of visible things, the Artist ought to beware that he abuses not the liberty of his imagination, in the shapes of monstrous and prodigious Images of things not known in nature; but as a true lover of Art, prefer a plain and honest work (agreeing with nature) before any phantastical and conceited device whatsoever.

IX. Lastly, root from Time, Form, Magnitude, Number, Proportion, Colour, Motion, Rest, Situation,

tion, Similitude, Distance, Imagination, and Light. in a fingle and complicate consideration, this Art hath its essence or being, and at last had by the help of industrious and unwearied minds, its Original production, and manife-

Ration. Light is that only thing, without which all those other things from which this Art springs, would be useles; without which the Art it self cannot be. "It "is (as Sanderson saith) the heavens off-spring, the eldest daughter of God, fiat lux, the first days Crea-"tion: it twinkles in a Star, blazes in a Comet; " dawns in a Jewel, diffembles in a Glow-worm; "contracts it felf in a Spark, rages in a Flame, is pale in a Candle, and dyes in a Coal. By it the "fight hath being, and the imagination life, which "comprehends the universality of all things without " space of place: the whole Heavens in their vast and "full extent, enter at once through the apple of the "Eye, without any straitness of passage: the fight "is a fense, which comprehends that, which no other "fense is capable of; it judgeth and distinguisheth "between two contraries in an inftant, it confiders "the excellency and beauty of every object: the "fpangled Canopy of Heaven by night, the wander-"ing Clouds by day, the wonderful Form of the "Rain-bow, the glorious matutine appearance of " Phabus; the meridional exaltation, the golden rays "which furround him, the mutability of his shadows, "his vespertine setting: the lofty tops of Mountains, "unacceffible and ridgy Rocks, profound Valleys, "large Plains, which feem to meet Heaven, green "Trees, and pleasant Groves, delightful Hills, sweet " and flowery Meadows, pleasant Streams, springing

"Fountains, flowing Rivers, stately Cities, famous "Towers, large Bridges, magnificent Buildings, fruit-

"ful

"ful Orchards and Gardens, shapes of living Creatures, from the Elephant to the Ant, from the Eagle to the Wren, and from the Whale to the Shrimp, the wonderful forms of Infects, the marching of Armies, the besieging and storming of Garisons the insolencies of rude Reople, and slight of the Distressed, the desolation and depopulation of Kingdoms and Countries, the sailing of Ships, terrible Seassingths; great beauty of Colours, together with thouffands of other things, all which it digests, and mar"finals in ample Order, that when occasion may be, it may exert its store, for the benefit, advantage, ad "vancement, and perfection of Art.

# CHAP. II.

## Of the farther progress of these Arts.

I. A 5 God Almighty (who is the Author of all wisdom)
was the first institutor hereof, so also was be the promulgator, by whom these Arts have made progression in the
world.

Certainly, faith Philostrans, Picture is an invention of the Gods, as well for the painted faces of the Meadows adorned with Flowers, according to the several Seasons of the year; as for those things, which appear in the Sky. What wonderful Eloquence is this! that in so few words, this Philosopher should clear so great a point. But what faith Gregorius Nysams? Man, saith he; is an earther Statue: and Suidas in Oratione prima de Beatitudinibus, speaking of Adam, saith, This was the first Statue; the Image framed by God, after which all the Art of Carving used by men receiveth directions: Lot's Wife was another, turned X 3

into a durable Pillar of Salt, of whom Prudentius (in Harmartigenia ) faith, she waxed stiff, being changed into a more brittle substance. The standeth Metamorphosed into Stone, apt to be melted, keeping her old posture in that Salt-stone Image; her comlines, her ornaments, her forehead, her eyes, her hair, her face alfo (looking backward) with her chin gently turned, do retain the unchangeable Monuments of her Antient offence; and though the melteth away continually in Salt sweat: yet doth the compleatness of her shape fuffer no loss by that fluidity; whole droves of beafts cannot impair that favoury stone so much, but still there is liquor enough to lick, by which perpetual loss, To these let us add the wasted skin is ever renewed. the pattern of the Tabernacle shewed unto Moses upon Mount Sinai: The Brazen Serpent made by the express command of God: The Pattern of the Temple (which David gave unto Solomon) after the form which God made with his own hand: Ezekiel's portraict of forusatem with its formal Siege upon a Tile by express command from God also: The Brazen Statue of our Lord fefus Christ erected by the woman healed of the bloody Issue, as is mentioned by Photius, and Aftering Bishop of Amasa, and other Ecclesiastick Writers: The Picture also of our Lord made without hands, as it is related by Damaseenus Cedrenus and others: The Pitture of Ghriff made in a Napkin or Towel, together with many more too tedious here to relate.

II. By vertne of this disting hand it was that many Artiffs of old attained to a certain hind of perfection in these

Arts

We will only refer the proof of this to the examples in the 31 of Exades of Bezeletl and Abolish; of whom God himself witnessets, that he called them by name

Chap. 2. Farther Progress of these Arts.

311

to make the Tabernacle; and filled them with his fplrit, not only to devise curious works in Gold, in Suver, in Brass, and in Silk; but also gave them skill to teach others the same.

III. Nature also hath not been idle, but hath acted a

Master-piece herein.

To pass by the glory of Flowers, the excellent comliness of beasts (as in the spots of Leopards, tails of Peacocks, and the like) I will only remark the same of a Gem, which Pyrrhus (who made War with the Romans) had, of which Phiny in lib. 34. cap. 1. of his natural History, reports, that it being an Agath had the nine Muses and Apollo holding of a Lute depicted therein; the spots not by Art, but by nature, being so spread over the stone, that each Muse had her peculiar mark. See Gafferel cap. 5.

IV. The care of Parents in the Education of their Chil-

dren, was another reason of the progress hereof.

The Grecians, faith Aristotle in cap. 3. lib. 8. of his Politicks, did teach their children the Art of Painting and Ptararch saith, that Paulus Amilius had Sculptors and Painters amongst the Masters of his children as well as Philosophers and Rhetoricians; and Ptiny saith, that by the Authority of Pamphitus, this Art hath been ranked among the liberal Sciences, and that only Free-born children should learn it. And Galen enumerating several Arts, as Physick, Rhetorick, Musick, Geometry, Arithmetick, Logick, Grammar, and knowledge of Law; add unto these, saith he, Carving and Painting. And as the Grecians were the first, that taught their children these Arts, so also they provided betimes for them choice Masters.

V. These Masters by their carefulness and vigilancy, not deceiving those that put their trust in them, became main Pillars of these Arts and propagated them to Posterity; which

by the addition of considerable gifts and remards had an ho-

nourable esteem in the world.

Their care was manifest in laying down solidPrinciples of Art; of which Quintilian in cap. 2. lib. 12, of his Institutions of Oratory saith, though vertue may borrow some forward fits of nature, yet she must attain to perfection by doctrine. Their vigilancy was seen in watching, to apprehend their Scholars capacities, that they might suit themselves accordingly; as in Tully's instance of Isocrates, a singular good teacher who was wont to apply the spur to Ephorus, but the bridle to Theopompus; And their reward was eminent, as Pliny noteth in Pamphilus his School, out of which Apelles and many other excellent Painters came, who taught no body under a Talent (which is about 175 pound sterling) thereby the better to maintain the Authority of Art.

VI. Their practice exactly agreed with their precepts.

As with Seneca, that labour is not loft, whose experiments agree with precepts; so with Quintilian those examples may stand for testimonies. And it was the practice of Painters of old, as Galen witnesseth concerning Polycletus, who hath not only set down in Writing the accurate precepts of Art; but also that he made a Statue according to the rules of Art contained in those precepts.

VII. These precepts which they taught their Scholars, they delivered in writing, that they might ever accompany

them where soever they went.

Apelles gave the precepts of this Art to his disciple Perseus in writing, as Polycletus did to his: besides innumerable others now in being too tedious here to recite. The like did these following, Adaus, Mylenaus, Alcetas, Alexis the Poet, Anasimenes, Antigonus, Aristodemus, Carius, Artimon, Callixenus, Christadorus, dorus,

dorus, Democritus Ephesius, Duris, Eupherion, Euphranor, Ishmius, Hegesander Delphicus, Hippias Eleus, Hypsicrates, Lamblicus, Juba Rex Mauritaniæ, Malchus, Bizantius, Melanthius, Menachmus, Menetor, Pamphilus, Polemon, Porphyrius, Praxiteles, Protogenes, Theophanes, Kenocrates, and many others, the chief of whose works

are now lost.

VIII. As Arts came now into estimation, so at length

Laws were established for their preservation; and punish-

ments for their prevarication.

The beginning of these Laws was first at Argos, Ephesus, Thebes and Athens, as also in Egypt, where a
workman (saith Diodorus Siculus) is fearfully punished, if he undertake any charge in the Commonwealth,
or meddle with any Trade but his own: the which
Law, saith Herodotus, the Lacedemonians did also approve of. By means of which Laws it was, that the
Artists of those Nations attained to such a perfection
of Art, as we shall hereafter relate.

IX. The fervent desire and love of emulation to excel others; the commendable simplicity of Art; together with the content and satisfaction of doing something well, gave a

large progress towards the advance of Art.

It was nobly said of Scipio Africanas, that every magnanimous spirit compares himself, not only with them that are now alive; but also with the samous men of all ages; whereby it appears that great wits are always by the sting of emulation, driven forwards to great matters; but he that by too much love of his own works, compares himself with no body, must needs attribute much to his own conceits. Dost thou desire the glory of swiftness; saith Martial (in Epigr. 36. lib. 12.) strive to out-go the Tyger, and the light Ostrich; it is no glory at all to out-run Asses. This emulation is the force of great wits, whereby our imitation

ration is provoked fometimes by envy, and fometimes by admiration, whereby it falls out, that the thing we earnestly seek after, is soon brought to some height of perfection; which perfection confilts in exact imitation, according to the simplicity of Art, and nor in gaudy appearances, which adorns the shadows much more than ever nature adorned the substance. This imitation of the life gave the Artizan fame; which fame quickened his aspiring thoughts, adding more fuel to the flames, till fuch time as he brought forth a most absolute work, whereby he conceived a joy.content and fatisfaction, as durable as the work it felf, upon which he now conceived himself a happy man. and through a just affiance of his vertues knows himfelf to be lifted up above the reach of envy, where he stands secure of his fame, enjoying in this life ( as if he were now confecrated unto Eternity) the veneration that is like to follow him after his death; thus an honest emulation and confidence, bringing forth works of general applaule, procureth unto its author an everlasting Glory. Now what a comfortable thing is this, to have a fore-feeling of what we shall afterwards attain to?

X. Another reason of the augmentation of these Arts, was the manifold uses thereof among men, either for good or

evil purpofes.

As in natural Sciences, where words come short, a little Picture giveth us the knowledge of Beasts, Birds, Fishes, and other forms, as well inanimate as animate: In the Tatticks, how should a General know how to set his men in array, unless he try the case by design or delineation? So in Architecture to pourtray Platforms after any fashion, and to work out the Patterns of high and mighty buildings in a little wax, keeping in so small an example the exact proportion of the grea-

## Chap. 2. Farther Progress of these Arts. 315

ter Structure: In Geometry the exactness of Lines. Angles, Surfaces and Solids: In Botanologia, the exact thapes of Herbs, Plants and Trees: In Zoologia the shapes of all living creatures: In Anthropologia, the exact description of all the parts of mans body inward and outward: In Chymia, the forms of all Chymical vestels and operations: In the lives of illustrious men and Princes, to express their forms and fhapes to the life, that age might not prevail against them, deferving thereby (as Varro faith ) the envy of the Gods theinselves: In Geography, to describe in small Maps Kingdoms, Countreys, and Cities, yea, the whole World: In Policy, as Michal in faving her husband David, Ptolomeus in the Image of Alexander, which he willingly let Perdicas catch from him, supposing it to have been the body it felf, thereby avoiding much blood-shed: Cyrus his wooden Persians in the Siege of Sardis, by which the Towns-men being frighted, yielded the City: Epaminondas at Thebes by the Image of Pallas did wonders: Amalis King of Leppt, his golden Image made of the Balin in which his feet uled to be washed, which the Egyptians religiously worshipped, whereby he brought them to affect him being now a King, who was of an ignoble and base Parentage; the magden Elephants of Perfeus King of Macedonia, With which he wanted his horses, that they might not be frighted in time of Battel The Ornaments of Temples, Market places and Galleries, places both publick and private fulius Cafar's Image in way, hideous to look to, for twenty three gaping wounds he received, did mightily for up the Romans to revenge his death. Worthy men which had deferved well of the world, had their memories conferved with their Images; by which all those that aspire to goodness, and to follow their steps, are likewise filled with hope. The Athenians.

mians have erected unto Afop a most goodly Statue, saich Phadrus, and have set a contemptible slave upon an everlasting base, that all might understand, how the may of honour lieth open to every one, and that glory likewise doth not so much follow the condition of our birth as the vertues of our life. Berosus excelled in Astrology, wherefore the Athenians for his divine Prognostications, erected him a Statue with a golden Tongue, set up in their publick Schools, as Pliny saith, slib. 2. cap. 37. Publick Libraries were surmished also with Golden, Silver, and Brass Images of such, whose immortal souls did speak in those places. The provocations of vices have also augmented the Art; it hath been pleasing to engrave manton lusts upon their cups; and to drink in Ribantary and Abominations, as Pliny saith in the Proem of his Book.

XI. The use therefore of these Arts extending it self so universally to all intents both in war and peace, it came to passthat Artificers were honoured by all sorts of men, which themselves perceiving, did still endeavour to encrease this

enjoyed favour by a daily advance of their skill.

By Kings they were honoured; for Demetrius, whilest at the Siege of Rhodes, came to Protogenes, leaving the hope of his Victory to behold an Artiscer. Alexander the Great came also to Apelles his Shop, often accompanied with many Princes. It was his will that none but Polyclerus alone, should cast his Statue in Brass, that none but Apelles alone should paint him in Colours, that none but Progrees alone should Engrave him. The estimation of the Artists were also understood from the esteem and high rates their works were prized at: a picture of Bularchus a Painter, was valued at its weight in Gold by Candandes King of Lydie: Aristides was so singular in his Art, that it is reported

of King Attalus that he gave an hundred Talents ( which is about feventeen thousand and five hundred pounds sterling) for one of his Pictures. As much had Polyclotus for one of his. Apelles had for painting the Picture of Alexander the Great, three thoufand and five hundred pounds given him in golden Coin. Cafar payed to Timomachus eighty Talents, ( about fourteen thousand pounds sterling ) for the Pictures of Ajax and Medea. Many more examples we might produce, but these may suffice; at length no price was thought equal to their worth: fo Nicias rather than he would fell his Picture called Necria to King Attalus, who proffered him fixty Talents, (worth near eleven thousand pound sterling) bestowed it as a Present upon his Country.

XII. Art meeting with such Successes, created a boldness

in Artificers, to attempt even the greatest matters.

The great Coloffes of the Antients may ferve here for an example; Zenxes above all the rest, hath been admired for his boldness: Euphranor also excelled Parrhafins in this kind, in that the Thefens of the one To infinitely excelled the Thefens of the other. So great an excellency of Spirit arose in the old Artificers, as not to be daunted by the Authority of those, who were like to censure their works: it was a great mark they aimed at, to avoid a prosperous shame or fear. And this they accomplished by taking care, not only to give them content, who must of necessity be contented with the work; but also that they might seem admirable unto them which may judge freely without controul. So they heeded to do well in the opinion of accurate and judicious spectators, rather than to do that which liked themselves. And therefore whatfoever is dedicated unto posterity, and to remain as an example for others, had need be well done, neat, polished,

lished, and made according to the true rule and law of Art. forafronch as it is likely to come into the hands of skilful Artificers, indicions centurers, and fuch as make a narrow feminy into every defect. But as it is impossible to attain to an excellency, or height of any thing without a beginning, to do the first things in soing on of the work feem to be the leaft; the height of Arts, as of Trees, delighteth us very much. fo do not the roots; yet can there be no height without theroots. And therefore we shall find that a frequent and continual exercise, as it is most laborious. to it is most proficable; feeing nature dath begin, bope of profit doth advance, and exercise doth accomplish the thing fought after. In fum, by doing quickly, we shall never learn to do well; but by doing well, it is very likely we may learn to do quickly. To this freedy and well doing there belongeth three things. viz. to add, to detract, and to change. To add or detract, requireth less labour and judgment; but to depress those things that swell, to raise those things that fink, to tye close those things which are scattered. to digest things that are without order, to compose things that are different, to reftrain things that are infolent, requireth double pains: for those things may be condemned, which once did please, to make way for inventions not yet thought of. Now without doubt, the best way for emendation is to lay by the design for a time, till it seem unto us as new, or anothers invention; left our own, like new births, please us too much.

XIII. Lastly, That which gave the greatest and as it mere, the last step towards the augmentation of Art, was that free liberty which Articans gave every one, so consume, to find fault with their works, and so mark their

defects.

It was the opinion of Senera, that many would have attained unto wildom, if they had not conceived themselves to be wise already. When Phydias made Jupiter for the Eleans, and shewed it, he stood behind the door liftning what was commended, and what discommended in his work: one found fault with the grofness of his nose, another with the length of his face, a third had something else to say: now when all the spectators were gone, he retired himself again to mend the work, according to what was liked of the greater part; for he did not think the advice of fuch a multitude to be a small matter, judging that fo many faw many things better than he alone, though he could not but remember himself to be Phydias. But vet Artificers did not from hence admit their judgements generally in every thing, but they followed their directions only in such things as did belong to their Profession. As when Apelles made a work, he exposed it in a place where all that passed by might see it; hiding himself in the mean time behind the Picture, to hear what faults were marked in his works. preferring the common people before his own judgment. And he is reported to have mended his work. upon the censure of a Shoo-maker, who blaming him for having made fewer latchets in the infide of one of the Pantoffles, than of the other: the Shoo-maker finding the work the next day mended according to his advice, grew proud, and began to find fault with the Legalfa; whereupon Apelles could not contain himself any longer, but looking forth from behind the Picture, faid, Ne futor utra crepidam, bid the Shoo-maker not go beyond his Laft; from whence at last came that Proverb. He is the best man that can advise himself what is fit to be done; and he is next in goodnels, that is content to receive good advice: but he that

that can neither advise himself, nor will be directed by the advice of others, is of a very ill nature.

#### CHAP. III.

Of the Consummation or Perfection of the Art of Painting.

I. A S Invention gave way to the advancement of Art,

So the advancement of the same made way for its

Perfection.

The Invention arose from the appearance of things natural, conceived in *Idea*'s, as we have abundantly fignified (in the first Chapter of this Book) the Advance from the bringing of those *Idea*'s to light through practice (by Chap. 2.) from whence arose things very excellent for greatness: very good for their usefulness, choice for their novelty, and singular for their kind.

II. Ease of Invention, Plenty of Matter, and Neatness of Work, were steps by which Art was consummated. For ease of Invention gave Encouragement, Plenty of Matter gave Formation, and Neatness gave Delight; all which so conspired together, to put so much of emulation into the Artificer, to undertake, or endeavour to do those things, which in their kind might never after be exceeded: this indeed was their aim of old, which although the antients of this Art could never attain unto, yet did they make fuch way, that some of their followers have done those things, which never any after them could ever mend, nor themselves scarcely come near. Easie invention springs out of a great and well rooted fulness of learning; by being converfant in all forts of studies, having familiarity with Antiquities; the knowledge of innumerable Hiftorical

rical and Poetical narrations, together with a through acquaintance with all fuch motions and Idea's of the mind, as are naturally incident unto men: for the whole force of this Art doth principally confift in these things, nothing bearing a greater sway in the manifold varieties of Painting.

III. it was the opinion of Painphillus (the master of Apelles) that without the knowledge of Arithmetick, Geometry, and the Opticks, this Art could not be brought.

to Perfection.

The examples of Phidias and Alcamenes is pertinently brought here: The Athenians intending to fer up the Image of Minerva upon a high Pillar, employed those two Workmen, purposing to chuse the better of the two; Alcamenes (having no skill in Geomemy nor the Opticks) made her wonderful fair to the eye of them that faw her near. Phidias contrariwife (being skilful in all Arts, chiefly the Opticks) confidering that the whole shape would change according to the height of the place, made her lips wide open, her nose somewhat out of order, and all the rest accordingly, by a kind of resupination: the two Images being brought to view, Phidias was in great danger to have been stoned by the multitude, until at length the Statues were fet up; where the sweet and excellent stroaks of Alcamenes were drowned, and the disfigured difforted hard-favouredness of Phidias his work vanished (and all this by the height of the place;) by which means Alcamenes was laughed at, and Phildias much more esteemed. Of like perfection is Amulius his Minerva; the Image of Juno in the Temple of the Syrian Goddess; the head of Diana exalted at Chios, made by Bupalus and Anthermus, Hercules in the Temple of Antonia, &c. An Artificer, faith Philostratus in Proamio Iconum, must understand the nature of a man throughly

Lib.IV

throughly, to express all his manners, guise, behaviour, &. he must discern the force in the constitution of his cheeks, in the turning of his eyes, in the casting of his eye brows; in short, he must observe all things which may help the judgethent; and whosever is thus furnished, will doublets excell, and bring things to perfection; he then may easily paint a mad man, an angry man, a pensive man, a joyful man, an earnest man, a lover, &. in a word, the perfection of whatsoever may possibly be conceived in the mind.

IV. Continual observation of exquisite pieces (whether Artificial or Natural) nimble conceptions, and tranquility

of mind, are great means to bring Art to Perfection.

The works of the Antients could never have been fo exquisite in the expression of Passions, but by these means. How perfectly did Zenxis paint the modest and chaste behaviour of Penetope; Timomachus the raging mad sit of Ajax; Silanion the frowardness of Apollodorus; Protogenes the deep pensiveness of Philisis; Praxiteles the rejoycings of Phine; Parrhusius aboy running in Armour; and Aristider his Anapanomenos dying for love of his Brother? Bodius his Image of Hercules is of the same nature: Themistius shews us the true Image of seigned friendship; Agellius a most lively Image of suffice; Apelles an admirable Picture of Slander; thousands of examples more might be drawn out of ancient Authors to approve these things, if these may be thought not sufficient.

V. This Perfection also lyeth in the truth of the matter,

the occasion thereof, and diferetion to use it.

The most antient and famous Painters did make much account of *Truth*, and had rather lose the nearness and glory of their pieces, than to endanger the truth of their story; which indeed is the great commendation of a Picture, for as much as *Lucian* saith.

That

That nothing can be profitable but what proceeds from truth. Occasion also is a great matter; the Pis cture of Bacobus may here ferve for an excellent example, whose passion of love was so clearly expressed therein; cafting aside his brave apparel, Flowers. Leaves, Grapes, &c. Now in representing things truly according to the occasion, discretion ought to be your guide; for as in Tragedies, so also in Pictures all things ought not to be represented; let not Medea (faith Horace in libro de Arte) murder her own children in the presence of all the people; let not the wicked Arrens boil humane fleth openly; there are doubtless many things, which had better be left our. though with some loss of the story, than with the loss of modesty; wanton, unlawful and filthy lusts (though they may gain the vain title of wit, yet) they diminish not only the estimation of the workman, but also the excellency of the work, debarring it of perfection. Precepts help Art much, in propounding unto us the right way; but where they fail, our wits must supply, by warily considering what is decent and convenient; for this Art requireth studious endeavours; affiduous exercitations, great experience, deep wisdom, ready counsel, veracity of mind, diligent observations, and great discretion.

VI. To the former add Magnificence, which gives Au-

thority to things excellents

Great minded men are most of all given to entertain stately conceits; therefore an Artizan ought to be of a magnanimous nature; if not, yet that at least he ought with a determined resolution to aim at magnificent things. So it seems that nature did dispose Nicophanes to a high strain of invention; Nicophanes (faith Pling, lib. 35. tap. 10.) was gallant and neat, so that he did paint Antiquities for Evernity, whereby

he was commended for the magnificence of his work. and gravity of his Art. Such Artificers therefore as do bring any thing to perfection, must be of an exceeding great spirit, and entertain upon every occasion great thoughts, and lofty imaginations; by this means they shall gain an everlasting fame; but this is impossible (faith Longinus) for any who busie the thoughts and studies of their life about vile and flavish matters, to bring forth any thing which might deferve the admiration of fucceeding ages. If any Artizan be not naturally of so great a spirit, let him help himself by the reading of History and Poese. History cannot but inspire a magnanimous Spirit, when she reprefents to us fo many rare exploits, and the examples of so many great, noble and valiant souls, who throughout all ages, in the midst of most eminent dangers have demonstrated their vertues and spirits not only to those present, but all succeeding times. Poesse also being of a haughty and lofty stile, doth much enlarge the mind, and from thence many excellent things are brought: The much admired Elean Jupiter which Phidias made. himself confessed to be formed after the Image of Impiter described in Homer. From the same Poet did Apelles paint the Image of Diana among the facrificing Virgins. It is not the prefent age, but the facred memory of all posterity, which gives unto us a weighty and durable crown of Glory.

VII. Exact Analogy or proportion, not only advanced

Art, but also brought it a degree nearer Perfection.

Philostratus calls it Symmetrie, some Analogy, others Harmony; this is the appellation of the Greeks; what ine Latines called it scarcely appears (as Pliny saith lib. 34. cap. 8.) yet words equivalent in power thereto are found as, Congruens, equality, and Tully (libro primo de Officiis) calls it Agreement and apt composition, Vitravius,

vins. Commodulation; Agellins calls it a natural competence; Quintilian approves the word proportion; by which faith Plutarch beautiful things are perfected: it is one of those things which the most High used in the fabrication of the world, (Wifd. 11. 20.) He hath disposed all things in measure and number and weight. The first giver of Symmetrie or Analogy was Parrhafins ; Polycletus was a diligent observer thereof ; Asclepiodorus, an exact practifer thereof, whose admirer was Apelles, who effeemed it to proceed out of some perfections in an Artificer furpassing in Art, and which is most apparent in naked and undisguised bodies. Strabe faith, that Phidias exactly observed this proportion in the Image of Jupiter Olympicus fitting. The same Phidias, as Lucian reports, could exactly tell upon the first fight of a Lions claw, how big a Lion he was to make in proportion to the fame claw. Lineal Picture is the foundation of all imitation, which if it be done after the true rules of proportion, will lively represent the thing delineated: this is a perfection in kind, which yet cannot be compared to the perfection of a coloured Picture.

VIII. This point of perfection was further advanced by

the exquisiteness of Colouring.

The perfection of Colouring ariseth from a certain right understanding of each colour severally, without which it is impossible to mix any thing rightly, as Hermogenes saith. The Greeks (as Pophyrius) call this mixtion of colours, corruption, which word Plucarch also used when he said that Apollodorus (who first found out the corruption or way of shadowing in colours) was an Athenian. Lucian calls it consuson, where he saith, that by the Art of Painting, Images were made by a moderate consuson of Colours, as White, Black, Yellow, Red, &c. by which, as Philostraus saith

in Procemio Iconum, we know how to imitate the diverfities of looks in a mad-man, in a fad or cheerful countenance; the colour of the eye, as brown, gray or black; of the hair, as golden, ruddy, bright, or flaxen; of the cloaths, as cloth, leather, or armour; of places, as chambers houses, forests mountains, rivers, fountains, etc. this is done by the accurate mixtion, due application, and convenient stradowing, as Lucian faith in Zennides through the observation of light, fliadow, ob feurity and brightness as Platarch will have it. For this cause, faith Johannes Grammarieus, is a white of golden Picture made upon a black ground. Light is altogether necessary, seeing there can be no shade without it: light and thadow cannot sublist asunder, because by the one, the other is apparent, for those things which are enlightned feem to flick out more, and to meet the eyes of the beholder; those which are thaded to be depressed ... This same of light and stradow. Nicias the Athenian did most accurately observe; as also Zeuxis, Polygnotus, and Euphraner, as Phitofratus faith in libro fecundo de vita Apollonii, cap, o. Apelles painted Alexander, as if he held lightning in his hand, Philostrains observed the same in the picture of an Ivory Venus, to that one would think it an easte matter to take hold of her; Panfias arrived to fuch an excellency in this, as scarcely any after could artain unto, as in the painted Ox, faith Pliny, which he made mimita-Observity or Darkness is only the duskiness of a deeper shadow, as brightness is the exaltation of light: if white and black be put upon the fame superficies, the white will feem nearest, the black farther off: this being known to make a thing feem hollow, as a ditch. cave, ciftern, well, &c. it is coloured with black or brown; and so much the blacker, so much the deeper it feems; extream black representing a bottomless depth;

depth; but to make it rife, as the breafts of a maid, a Aretched out hand, or there is laid round or on each fide fo much black or brown, as may make the parts frem to flick out by reason of the adjacent hollowness: brightness is sometimes used for necessity, but generally for ornament, ) as in the pictures of Angels, Gems, Armon, Flame, Flowers, Gold, and the like ) the which is made always with a mixture of light; which mixtion Painters call Harmoge, but is nothing else save an undiscernable piece of Art, by which the Artisan Stealingly paffeth from one colour into another, with an in sensible distinction; this Harmoge is most perfect in the Rainbon, which containing evident variety of Colours, yet leaves them to indultinguishable, as that we can neither see where they begin, nor yet where they end, as Boethius observes in libri quinti de arte musica capite quarto. The last and chief perfection of colouring lieth in the out-lines, or extremities of the work. being cut off with fuch a wonderful fubtilty & sweetness as to present unto us things we do not see, but that we should believe that behind the pictures, there is fomething more to be feen than can eafily be difcerned; thereby fetting forth as it were, those things which are really concealed, this was Berrhasius his chief glory; but herein Apelles exceeded all others whatfoever, as Petronius in Satyrico feems to affirm.

IX. Action and Passion is next to be considered, in which

confifts life and motion.

There is not any thing that can add a more lively grace to the work, than the extream likeness of motion, proceeding from the inward Action or Passion of the mind. It is therefore a great point of Art, which leads unto *Perfection*, the which we are to learn by casting our eyes upon nature, and tracing her steps. Consider all the gestures of the body, as the head, by which

328

is expressed the affections of the mind. The casting down of the head, sheweth dejection of mind; being cast back arrogance; hanging on either side, languishing being stiff or sturdy, churlishness: by it we grant. refuse affirm, threaten; or passively, or bashful, doubtful, fullen, envious, &c. by the motions of the Countenance appears forrow, joy, love, hatred, courtefie, courage, dejection, &c. by the motions of the countenance, are exprest the qualities of the mind, as modefty and fhamefacedness or boldness and impudences but of all the parts of the countenance, the eyes are most powerful, for they, whether we move or move not thew forth our joy or forrow; this is excellently exprest by the Prophet, in Lam. 3. 48. יסטר בח בחלים אוני על בחבר בחיים palge majim terrad gneni, gnat sheber bat gnammi, which Tremellius renders, Rivis equarum perfluit oculus mens, propter contritionem filia populi mei: and again עיני נגרה ו לא חרמה gneni niggerah velo tidma, i. C. oculus mens defluit nec desistit. For the same purpose it is that nature hath furnished them with tears; but their motion doth more efpecially express the intention, as meekness, pride, spitefulness, and the like; all which are to be imitated, according as the nature of the action shall require, as staring, closed, dull, wanton, glancing, asking or promising something. The eye-brows also have some actions, for they chiefly command the fore-head by contracting, dilating, raising and depressing it; wrinkled brows shew sadness and anger; displayed, cheerfulness; hanging, shame; elation, confent; depression, dissent, &c. The Lips shew mocking scorning, loathing, &c. The Arm gently cast forth, is graceful in famillar speech; but the arm spread forth towards one fide, shews one speaking of some notable matter; without the motion of the hands all motion is maimed: ed: The hands as it were call, dismiss, threaten, request, abhor, fear, ask, demand, promise, deny, doubt, confess, repent, number, measure, rejoyce, encourage, beseech, hinder reprove, admire, relate, commend, &c. In admiration we hold the hand up, bent somewhat backward. with all the Fingers closed: In relating we join the top of the fore-finger to the thumb-nail: In promifing we move it foftly: In exhorting or commending, more quick: In penitence and anger, we lay our closed hand to the breast: We close the fingers ends and lay them to our mouth when we consider, &c. It is not yet enough that the Picture or Image refembles the proportion and colour of the life, unless it likewise refembles it in the demeanour of the whole body; therefore Callifratus calls this Art the art of counterfeiting manners. Uliffer is evidently laith Philoftratus, difcerned by his aufterity and vigilancy; Menelans by his gentle mildness; Agamemnon by a kind of Divine Majesty; Ajax Telamonius, by his grim look; Locrus by his readinels and forwardness. The best Artists ever change their hands, in expressing of Gods, Kings, Priests, Senators, Orafors, Musicians, Lawyers, &c. Zenxis painted the modesty of Penelope: Echion made a new married but shamefaced woman: Arifides painted a running Chariot drawn with four horses ! Antiphilus made a boy blowing the fire : Philoxenus Eretrius depicted the Picture of Wantonness: Parrhasins made the Hoplitides or Pictures of two armed men, as may be feen in Pliny lib, 35. cap. 9, 10, and 11. Boethins made a babe strangling a goose: Praxiteles made a weeping woman. and a rejoycing whore: Euphranor drew the picture of Paris as a Judge, a Wooer and a Soldier : See Pliny lib. 34. cap. 8. where you may have many other examples. It is worth our pains to fee in Calliftratus thefe descriptions at large, whereby we may see it is a singular ! erfection of Art. X. The X. The last step of Perfection is the right ordering and

disposing of things.

This order or disposition must be observed as well in a picture confifting of one figure, as in a picture of many figures. The nature of man, faith Xenophon in Occonomico, cannot name any thing to ufeful and fair, as order; a confuled piece of work cannot deferve admiration; those things only affect us, wherein every part is not only perfect in it felf, but also well disposed by a natural connexion. It is not enough in a building to bring hair, lime, land, wood, frones, and other materials, unless we take care that all this confused stuff be orderly disposed to the intent. Wante it felf feems to be upholden by Order, and fo are all things elfe which are subjugated to the same Law. Now the way to attain to this true order of disposition, is first to conceive the Idea of the history in the imagination, that the presence of the things in the mind may suggest the order of disposing each thing in its proper place, yet with that fubtility that the whole may represent one entire body. Secondly, That the frame of the whole structure of this disposition, may be analogous to the things themselves; so that we may at once represent things which are already done, things which are doing, and things which are yet to be done; perfecting, as Philoftratus faith, in every one of thele things, what is most proper, as if we were busied about Thirdly, An historical Picture must one only thing. represent the series of the history, which although the Picture be filent, yet that the connexion might (as it were) speak, putting the principal figures in the principal places. Fourthly, The parts must be connected, easily rolling on, gently flowing or following one another, hand in hand, feeming both to hold and be upheld, free from all abruption, well grounded, finely framed.

framed, and firongly tyed up together; that the whole may be delightfome for its equality, grave for its fimplicity, and graceful for its universal analogical comprofure. Fifthly. That most excellent pieces ( if the hiffory will fuffer it ) be shadowed about with rude thickets, and craggy rocks, that by the horridness of fuch things, there may accrew a more excellent grace to the principal; (just as discords in Musick make fornetimes concords) from whence refules a fingular delight. Sixthly, That to these things be added pershiswitz; which, as Lucian faith, through the mutual connexion of things, will make the whole compleat and perfect. Seventhly and lastly, that the disposition of the proportion be observed, in the due distance of each figure, and the polition of their parts, of which we have faid fomenhing, Section feventh, but in general Pliny (lib. 35 cap. 10.) faith that in this general disposition of proportional distances, we have no rules; our eye must teach us what to do; to which Quintilian affents, where he faith, that these things admit no other Judgment, but the judgment of our eyes

XI Lastly, For the absolute Consummation or Perfetion of the Art, excellency of Invention, Proportion, Colour, Life and Disposition, must universally concur, and conspire, to bring forth that comely gracefulness, which is the very life and soul of the work, the entire and joint Summ

of all perfections.

It is not enough, that a Picture is excellent in one or more of the aforefaid perfections, but the confumnation is, that they all concur; for if but one be wanting, the whole work is defective. A good invention affects the mind; true proportion draws the eyes; lively motion moves the foul; exquisite colours beguile the phantasie; and an orderly disposition wonderfully

332

derfully charms all the fenses; if all these unite, and center in one piece, how great an excellence and perfection will appear? What a comely Grace? this Grace ir is, which in beautiful bodies is the life of beauty, and without which, its greatest accomplishments cannot please the beholder. For it is not so much the perfection of Invention, Proportion, Colours, Motion and Disposition apart, which affect the senses, but all shofe perfections absolutely united, which brings forth that comely Grace, and highest Perfection, which Art aims at, and the Artizan Strives after. This Grace proceeds not from any rules of Art, but from the excellent spirit of the Artificer; it is easier attained by obfervation and a good judgement, than learned by Precepts, as Quintilian in his Institutions lib. 11. cap. 1. learnedly observes. And this Grace is most graceful, when it flows with facility, out of a free Spirit, and is not forced or strained out with labour and toil, which quite spoils and kills the life of the work: Now this facility forings from Learning, Study and exercitation. Art and Nature must concur to the Constitution of this Grace; Art must be applied discreetly to those things which we naturally affect, and not to things which we loath; left we miss of that Glory which we seek after.

### CHAP. IV.

How the Ancients depicted their Gods: and first of Saturn.

TIE here intend to comprehend the various wayes of the Antients in depicting their Idols, according to the customs of those several Nations, where they were adored and worshipped, and that from the most Autient, chiefest and best approved Anthors now extant.

I. The

I. The Ancient Romans figured Saturn like an old man, with a Scythe or Hook in his hand, by some signifying Time, as his name Chronos also intimates.

II. They also figured him in the shape of a very Aged man, as one who began with the beginning of the World, holding in his hand a Child, which by

piecemeals he feems greedily to devour.

By this is signified the revenge he took for being exputsed. Heaven by his own Children, of which those which escaped his sury, were only four, Jupiter, Juno, Pluto, and Neptune, by which is shadowed forth the four Elements, Fire, Air, Earth, and Water, which are not perishable by the all-cutting Sickle of devouring Time.

III. Martianus Capella depicts him an old man, holding in his right hand a Serpent, with the end of its tail in its mouth, turning round with a very flow pace, his temples girt with a green wreath, and the hair of

his head and beard milk white.

The wreath on his head shows the Spring time, his snowy hair and beard, the approach of churlish winter; the slowness of the Serpents motion, the sluggish revolution of that Planet.

IV. Macrobius describes him with a Lions head, a

Dogs head, and a Wolfs head.

By the Lions head is fignified the time present, (which is alwayes strongest, for that which is must needs be more powerful than that which is not:) by the Dogs head, the time to come, (which always fawns on us, and by whose alluring delights we are drawn on to vain and uncertain hopes:) and by the Wolfs head, time past, (which greedily devoureth what soever it sinds, leaving no memory thereof behind.)

V. Macrobius also saith, that among the rest of his descriptions, his feet are tyed together with threds of

Wooll.

By which is shewed, that God does nothing in hafe, por speedily castigates the iniquities of man, but proceeds Rowly and unwillingly, to give them time and leifure to amend.

VI. Eusebins faith, that Aftarte (the daughter of Calum, wife and fifter of Saturn) did place alloupon his head two wings, demonstrating by the one, the excellency and perfection of the mind; by the other,

the force of fenfe and understanding.

The Platonicks understand by Saturn the mind, and its inward contemplation of things coelestal, and therefore called the time in which he lived, the golden Age, it being replete with quietness, concord, and true content.

# CHAP. V. How the Antients depicted Jupiter.

Rpheus describes him with golden locks, having on his temples peeping forth two golden horns, his eyes shining, his breast large and fair, having

on his shoulders wings.

By the golden locks is signified the Firmament, and its glorious army of traincent Stars : by his two Horns, the East and West: by his eyes, the Sun and Moon: by his breast, the spacious ambulation of the air; and by his wings the fury

of the winds.

II. Porphyrius and Suidas depicture the Image of 74piter fitting upon a firm and immoveable feat; the upper parts naked and uncloathed, the lower parts covered and invested; in his left hand a Scepter; in his right hand a great Eagle, joined with the figure of Ki-Etoria

This

This Image was erected in Pirwus, a stately and magnificent Gate of Athens: by the seat is showed the permanency of Gods power: the naked parts show that the compassion of the Divine power is always manifest to those of an understanding Spirit: the lower parts covered, show that while we wallow in the world, and as it were rock'd asseption with the illicebrous blandishments thereof, that the divine knowledge is hid and obscured from us: by the Scepter is signified his rule over all things: by the Eagle and Victoria how all things stand in vassalage and subjection to the all-communding power.

III. Marrianus depictures him with a regal crown, adorned with most precious and glittering stones; over his shoulders, a thin vail (made by Patias own hands) all white, in which is inserted divers small pieces of glass representing the most resplendent Stars; in his right hand he holdeth two balls, the one all of Gold, the other half Gold, half Silver; in the other hand an Ivory Harp with nine strings, sitting on a stockets, wrongsit with strange works, and Peacocks seathers; and near his side lieth a tridental gold embos

fed mass.

IV. Plutarch faith that in Crete, he had wholly hu-

mane shape and proportion, but without ears.

By that was signified that Superiours and Judges ought not to be carried away by prejudice nor perfuasion, but stand firm, stedfast and upright to all without partiality.

V. Contrariwise the Lacedamonians framed his pi-

cture with four ears.

By that they fignified that God heareth and understandeth all things; and that Princes and Judges ought to hear all informations, before they deliver definitive sentence or judgment. VI. Pausanias saith that in the temple of Minerva (among the Argives) the statue of supiter was made with three eyes; two of them in their right places; the other in the middle of his fore-head.

By which is fignified his three Kingdoms ; the one Hea-

ven; the other Earth; the last Sea.

VII. With the Eleans (a people of Greece) the Statue of Jove was compacted of Gold and Ivory, empaled with a Coronet of Olive leaves; in his right hand the Image of Victoria; in his left a Scepter, on the top of which was mounted the portraicture of an Eagle, upon a feat of Gold, enchased with the forms of many unknown Birds and Fishes, upheld and supported by four Images of Victoria.

VIII. In Caria (a place of the leffer Asia) the Statue of Jupiter was made holding in one of his hands

a Pole-axe.

The reason of this was, as Plutarch saith from Hercules, who overthrowing Hippolyta the Amazonian Queen, took it from her, and gave it to Omphale his wife a Lydian. The Platonists understand by Jupiter, the soul of the world; and that divine spirit through whose Almighty Power, every thing receives its being and preservation.

IX. He is also painted with long curled black hair in a purple robe; trimmed with Gold, and sitting on a golden throne, with bright yellow clouds dispersed

about him.

### CHAP. VI.

### How the Antients depicted Mars.

I. Maribin faith that the Pictures of Mari were adorned and beautified with the Sun-beams, in as lively a manner as could be devised; with an Aspect fierce, terrible, and wrathful, hollow red eyes, quick in their motion, face all hairy, with long curled locks on his head, depending even to his shoulders, of a coal black colour, standing with a spear in the one hand, and a whip in the other.

II. He is also fometimes depicted on horse-back and sometimes in a Chariot, drawn with horses called Fear and Horror: some say the Chariot was drawn with two men, which were called Fary and

Violence:

III. Statism faith he wore on his head a helmet most bright and shining, so fiery as it seemed there issued stathes of lightning; a breast-plate of Gold, insculp'd with fierce and ugly Monsters; his shield depainted all over with blood, enchased with deformed beasts, with a spear and whip in his hands, drawn in a Chariot with two horses, Fury and Violence, driven with two churlish Coach men, Wrath and Destruction.

IV. Isidorus faith that the Picture of Mars was de-

painted with a naked breaft.

By which is fignified that men ought not to be timorous in war, but valiantly and boldly expose themselves to hazards and

dangers.

V. Statins faith that the house of Mars was built in an obscure corner of Thracia, made of rusty, black Iron; the Porters which kept the gates were Horror and

and Madness; within the house inhabited Fury, Wrath, Impery, Fear, Treason and Violence, whose governess was Discord, seated in a regal throne, holding in one hand a bright sword, and in the other a basin full of

humane blood.

VI. Ariosto, describing the Court of Mars, saith, that in every part and corner of the same were heard most strange Echoes, fearful stricks, threatnings, and dismal cryes; in the midst of this Palace was the I-mage of Virtue, looking sad and pensive, full of sorrow, discontent and melancholy, leaning her head on her arm: hard by her was seared in a chair Fuer in triumph: not far from her sate Demb, with a bloody stern countenance, offering upon an Astar in mens skulls, humane blood, consecrated with coals of fire, fetch'd from many Cities and Towns, burne and ruinated by the tyranny of War.

#### CHAP. VII.

How the Antients depicted Phoebus or Sol.

I Macrobius faith that in Affria was found the Statue of Apollo, Phabus or Sol, the father of Affinance, in the form of a young man, and beardless, polithed with Gold, who stretching out his Arms, held in his right hand a Coachmans whip; and in his left a thunderbolt with some ears of Corn.

The Tyrans of Syracuse, Dionysius, with fury pulled off the beard from the sigure of Æsculapius, saying it was very incongruous that the father should be beardless, and the son have one so exceeding long.

II. Ensebins

If. Experies faith that in Egypt the Image of Sol was fet in a flip, carried up, and supported by a Crossiller and that they (before letters were invented) framed the fliable of the Sun, by a Scepter, in the top of which was dexteroidly engraven an eye.

The Scepter lightfied Government : the Eye, the power

which over fees and beholds all things.

III. The Lacedamontons depicted Apollo with four

ears, and as many hands.

By which was signified the judgment and prindence of God being swift and ready to hear, but slow to speak, and from thence grew that proverb among the Grecians.

IV. Herodolog reporteth that the Phenician had the Statue of the Sun made in black stone, large and spacious at bottom, but sharp and narrow at top, which they boalled to have had from Heaven.

V. Lattantin faith that in Persia, Phabus of Apollo was their thiefest God, and was thus described; the head of a Lion habited according to the Persia an custom, wearing on his head such ornaments as the women of Persia used, holding by main force a white Cow by the horns.

The head of the Lion showeth the Suns dominion in the fign Leo; the Cam shows the Moon, whose excitation is Taurus: and his forceable holding, the Moons Eclipse which

The cannot avoid.

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VI. Panjanias telleth that in Patra a City of Achaia, a metalline Statue of Apollo was found in the propor-

tion of an Ox of Cow.

VII. Lucianus laith that the Affrians (haped him with a long beard (shewing his perfection;) upon his breast 2 shield; in his right hand a spear, in the rop of which was Vittoria; in his left hand Anthus, or the Sun slower: this body was covered with a vestment, upon which was painted the head of Medassa, from which Z 2 dangled

dangled downwards many swarms of snakes; on the one side of him Eagles slying, on the other side a lively Nymph.

VII. The Egyptians composed the statue of the Sun in the shape of a man, with his head half shaven.

By the head half shaven, is signified that though his beauty or shining may be clouded for a time, yet that he will return and beautissie the same with his pristin brightness; as the growing of the hairs (which signisse his beams) to their sull extent and perfection again, may denote.

IX. Marians thus describes him; upon his head (saith he) he wears a royal and gorgeous Crown, inchased with multinudes of precious Gems; three of which beautifie his fore-head; fix his temples; and three other the hindermost part of the Crown: his hair hanging down in treffes, looks like refined Gold, and his Countenance wholly like flame: his vestment is thin, subtil, and wrought with fine purple and gold; in his right hand he holds a bright shield, and in his left a flaming fire-brand: on his feet he hath two wings, beset with fiery Carbuncles.

X. Enfebius writeth that in Elephantinopolis (a City in Egypt) the Image of Apollo was framed to the due likeness of a man throughout the body, save only, that he had the head of a Ram, with young and small horns, and his aspect of a Cornlean and blewish green,

not unlike to that of the Sea.

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The head of the Ram signifies the Sun's exaltation in the sign Axies; and the young horns the change or New of the Moon, made by her conjunction with the Sun, in which she looks blemish.

XI. He is also dr. wn with long curled golden hair crowned with a lawrel in a purple robe, a filver bow

in his hand, fitting on a throne of Emeralds.

Thera

There might you see with greatest skill intexed,
The partratiture of Phoebus lively drawn;
And his fair Sisters shape thereto annexed,
Whose shining parts seem'd shadow'd o're with lawn.
And though with equal art both were explain'd,
And workmens care gave each of them their due,
Tet to the view great dissernce remain'd,
In habis, shape, aspett, and in their hue.
For one of them must give the day his light:
And th' other reign Commandress of the night.

#### CHAP. VIII.

How the Antients depicted Venus.

I. HER Statue is framed in the shape of a most beautiful and young woman, standing upright in a huge shell of fish, drawn by two other most ugly and strange Fishes, as Ovid at large noteth.

II. Pansanins saith she is drawn in a Coach, through the airy passages, with two white Doves (as Apuleins also affirmeth) which are called the birds of Venus.

III. Horace and Virgil affirm that the Chariot of Venus is drawn by two white Swans, of which Stating also maketh mention, who saith that those birds are most mild, innocent, and harmless, and therefore given unto Venus.

IV. Praxiteles an excellent engraver in the Island of Gnidos, made her Image naked, and without clothes.

as also did the Grecians.

By which was signified that all luxurious and licentious people were by their inordinate lusts, like books, deprived of sense, and left as it were naked and despoited of reason and understanding; and oftentimes also strupped thereby of their riches, goods and estates.

V. Ladamine faith that the Lacedomonians framed and composed the Image of Venue all armed like a Warriour, holding in one hand a Spear, in the other

a Shield or Target.

And this was by reason of a certain Victory which the women of that place got over their enemies, the people of Messenia, which success they supposed to have proceeded from the power and assistance of Venus, as inspiring these womens hearts with courage, stoutness and resolution.

VI. She is also depicted with yellow hair attired with black; a scarlet, or else dun-coloured robe.

#### CHAP. IX.

How the Antients depicted Mercury.

I. THE Antients described him in the shape of a young man without a beard, with two small wings fixed behind his shoulders and ears, his body almost all naked save that from his shoulders depended a thin vail, which winded and compassed about all his body; in his right hand he held a golden purse, and in his left a Caduceus, or snaky staff, to wit, a slender white wand, about which two Serpents do annodate and entwine themselves, whose heads meet together just at the top, as their tails do at the lower and.

This refemblance was called Concordia or Signam Pacis; upon which it came to pass, that Ambassadows, and great men in masters of State, carried always in their hand such a like staff, and were called Caduceators.

II. Appleins writeth that Mercury was a very youth, having very short hair on his head of an Amber co-lour, and curled, having for a vestment only a subtil

and thin vail made of purple Silk.

III. Martianus Capella describes him young, yer of a strong and well composed body, with certain young hairs of a yellowish colour sprouting out of

his chin.

IV. Paulaniae faith that in a Province of Corinth, he was depicted like a young man carrying a ram upon his shoulders—and that a Statue (brought from Arcadia unto Roma) erected in the temple of fupiter Olympicus, had on its head a helmet of engraven steel; and over his shoulder, a coat, who held under his arm the Image of a Ram.

V. Among some of the Egyptians his Image was framed with a head like a Dog's, holding in his right hand a Cadegous or snaky wand; shaking with his left

a green bough of a Palm.

By the head of the Dog was understood subtility and craftiness (no beast being so subtil as a Dog;) by the snaky wand the power of wisdom and Eloquence in producing of

peace signified by the green Palm.

VI. By some he was depicted in the similitude of a very aged man, his head almost bald, saving that on the sides there remained some few hairs, short and curled; his look grim, severe and sowre; his complexion of a tawny, antient hue; his upper garment, of a Lions skin; in his right hand a huge pole-ax, in his left hand an Iron bow: at his back hanging a Quiver of steel-headed arrows: to the end of his tongue.

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were fastned many small chains of Gold, at whose ends were tyed multitudes of all sorts of men, which he seemed to draw unto him, looking always backward, to behold the innumerable troops of people following him.

By this description is signified the all powerful and attractive vertue of Eloquence; which by his age is underflood to be found only in old, wife and experienced men, as being in them more mature and perfect, than in those of jounger years, of which Homer speaks at large in his Commendation and Praise of Nestor: from whose mouth (saith he) plentifully roked forth most pleasant and dulcid streams; whose pen distilled Crystalline drops of delicious sweetness; whose works and fruits so compleatly adorned with golden sentences, as wageth the malice of time, and mitigateth and allayeth the spight of forgetfulness, that his perpetuity is ingraven in the brass-leaved books of eternal memory, never to be blotted out.

VII. He is also drawn with long curled yellow hair in a coat of flame colour, and with a mantle purely white, trimmed with Gold and Silver; his Beaver white, with white feathers, his Shoos Golden, his

Rod Silver.

#### CHAP. X.

How the Antients depicted Diana or Luna.

I. D'ana, Cynthia, Lucina or Luna was according to Propertius depicted in the likeness of a young beautiful virgin; having on either side of her forehead two small glistering horns, newly putting forth, drawn through the air in a purple coloured Coach, by two swift paced horses, the one of a sad Colour, the other of a white.

These

Thefe two differing horses Boccace saith, shew that

The bath power both in the day and night.

II. Claudianus faith that her Chariot is drawn by two whiteBullocks, (which Image the Egyptians worshipped with great zeal & reverence) having one of their flanks bespotted with divers stars, and on their heads two such sharp horns as the Moon hath in her chiefest wane.

III. Cicero describes her statue (which he brought out of a temple in Cicilia) of a wonderful height, and large dimension, the whole body covered with a thin vail, of a youthful aspect, holding in her right hand a lively burning torch, and in her left an Ivory bow, with a Quiver of Silver-headed arrows hanging

at her back.

IV. The Poets (who call her the goddess of hunting and imperial governess of Woods and Groves) describe her in the habit of a young Nymph, with her bow ready bent in her hand, and a Quiver of arrows hanging by her left side, a swift paced Grey-hound fast tyed to her right side, with a collar about his neck; and after her following troops of Sylvan Virgins, which are chast, and are called the Nymphs of Diana.

V. These Virgins and Votresses of the Goddess are

thus described.

Scarce mounted Sol upon his glorious Car,
When o're the lofty hills, and lowly plain,
Running apace, you might perceive afar
A Troop of Amazons to post amain.

Rut when they weaves come auto more view.

But when they nearer came unto your view, You might discern Diana and her Crew. A careless crew of lively Nymphs, despising The joyous pleasures and delights of love; Wasting their days in varial sports devising; Which know no other, nor will other prope. Wing'd with desire to overtake the chase, Away they stung with unresisted pace. Their necks and purple veined arms are bare, And from their Ivory shoulders to their knee, A Silven vestment o're their skin they ware, Through which a piercing eye might chance to see.

Close to their bodies is the same enginted,
Bedeck'd mith pleasing flowers phere inserted.
Each in her hand a Silver bow doth hold,
With well-stor'd Quivers hanging at their backs:
Whose arrows being spent they may be hold
To borrow freely of each others packs.

Thus are these nimble shipping Nymphs displayd, That do attend that Goddess, Queen and Maid.

VI. In Arcadia faith Paufanias, was a statue of Diana, covered over with the skin of a Hind, and from her shoulders hung a Quiver of Arrows; in one hand a burning Lamp, the other leaning upon the heads of two serpents, and before her seet a hound.

VII. The Egyptians worshipped her under the name of Iss; and depictured her covered with a black and sable vestment, in token that she her self giveth no light; holding in one hand a Cymbal, in the other an earthen vessel of water, upon which as Servius saith, many thought her to be the Genius of Egypt.

By the Cymbal is shewed the murmurings and roarings of Nilus, when it overflows Egypt; and by the other vessel the nature of the Country, which is moist and full of lakes,

pools and rivers.

VIII. She is also depicted with yellow hair, a grass green mantle, trimmed with Silver; buskins Silver;

bow Golden, Quiver of various colours.

IX. Nymphe Diane in white linnen to denote their Virginity, and their garments girt about them, their arms and shoulders naked bows in their hands and arrows by their sides.

CHAP.

# CHAP. XI.

# How the Antients depicted Janus.

I. Tanus is depicted with two faces; in the one of his hands is a long rod or wand; in the other a Key.

The two faces of Janus fignific time; the one being wither and hours, then's time past, the other youthful and beard-

less, time to come.

Il Pliny faith that Numa King of the Romans, caused the statue of James to be hewed out in such fort, that the singers of his hands appeared to be three hundred fixty sive, to shew that he was God of the year, whereupon they called the first month of the year James their God.

Under the feet of Janus are oftentimes placed twelve Altars, shewing thereby the months of the year, or signs of the Zodiack, through which Sol makes his revolu-

tion.

III. The Phonicians, as Cicera and Macrobius report, framed his Image in the form of a ferpent, hold, ing her tail in her mouth, and continually turning round.

IV. Some depicted Janus with four faces, (as were those statues which were found in divers paces of Tuj-

CANT

By the four faces were signified the four seasons of the year, Spring, Summer, Autumn, and Winter: which some think to be Venus, Ceres, Bacchus and Vulcan; and sometimes the winds with Æolus their Commander.

#### CHAP. XIL

# How the Antients depicted Aurora.

I. Homer describes her like a young Virgin having her hair dishevelled, and hanging loose about her shoulders being of the colour of the purest gold fitting in a golden chair, with all her veltments of that hue and colour.

II. Virgil faith, that upon the instant time of the sable nights departure, the cometh with one of her hands full of Roses, Gillislowers and Lillies, taken out of a basket which she carries in the other hand, which the beforinkles on the marble pavement of the lower Heavens, adorning the Sun with unspeakable beauty.

III. Others describe her, holding in one hand a flaming torch, and drawn in a gorgeous and star-bespotted Chariot, by winged Pegafas; which favour the obtained of Impiter by many importunate requests, pre-

fently after the downfal of Bellerophon.

IV. She is as it were the Herald and Messenger of Phabus, who receives her being from the vertue of his beams; and is no other but that rubicund and Vermillion blush in Heaven, which sol's first appearance worketh in the Orient, and from thence descending beautifies our Hemisphere with such a resplendency.

V. She is also depicted in a purple robe, in a blew

mantle fring'd with Silver.

### CHAP. XIII.

How the Antients depicted Juno.

L SHE was fet forth by the Antients like a middle Saged women, holding in one hand a Silver versel, in the other a sharp Spear; and Homer saith she was drawn in a Chariot glistering with precious stones; whose wheels were Ebony, and their nails sine silver, mounted upon a Silver Seat; and drawn with horses, which were fastned with chains of Gold.

II. She is oftentimes depicted with a Scepter in her hand, to shew that she hath the bestowing of Govern-

ments, Authorities and Kingdoms.

III. Marians: depicts her (fitting in a chair under Impiter) with a thin veil over her head, with a Coronet upon it inchafed and adorned with many precious Jewels; her inward veftment fine and glittering, over which depended a mantle of a fad and darkith colour, yet with a fecret shining beauty; her shooes of an obscure and sable colour; in her right hand a thunderbolt; and in her other a loud noised Cymbal.

IV: Pausanias saith that in a temple in Corinth, her statue (made of Gold and Ivory) was adorned with a glorious Crown, on which was insculped the pictures of the Graces; with a Pomegranate in the one hand, and a Scepter (on the top of which a Cuckow) in the other: for that Impiter, when he was first enamoured

of ?..... transformed himself into that bird

Touching this story (and others of like kind) Paulanias saith, that although he did not believe such things to be true, nor any others, which are so written of the Gods; yee, faith he, they are not altogether to be rejected, in that there were no such things as reported but that they were impleated and filled with mysteries and curved in themselves an inward meaning, and secret understanding, the which no doubt some might by their writings have unstradowed, if the tyranny of sore-passed times had not destroyed and object at the same.

V. Terrullian writeth that in Argus a City in Greece, the statue of Juno was covered all over with the boughts of a Vine, and underneath her feet lay the skin of a Lion, which discovered the hatred and distain the bare towards Bucchas and Hereules, to whom (25 the

Poets fay ) the was frep-mother.

VI. Some have painted her a middle aged woman, holding in one hand a poppey-flower or head with

a voke or pair of letters lying at her feet.

By the yoke was meant the band of marriage, which tyeth man and wife together: and by the Poppey, frusty sulness or the innumerable iffue of children, which are brought forth into the world (signified by the roundness of the Poppey head, and its numberless seeds therein contained.) From hence many suppose her to be the goddess of marriage.

VII. She is also painted with black Hair and Eyes, adorned with a sky-colour'd mantle or pied: wrought with Gold and peacocks eyes; like the orient city.

cles in the Peacocks train.

CHAP

## CHAP. XIV.

How the Amients depicted Ops or Tellus.

I. Martianus faith, that Ops (the wife of Saturn) is an old woman, of great bigness, continually bringing forth children, with whom she is encompassed and set round, going in a green vestment, with a veil over her body, sported with divers colours, wrought with infinite curious knots, and fet with all forts of Gems and Metals.

II. Varro ( out of Boccace ) thus describes her : The Is crowned (faith he) with a Crown insculpt with Castles and Towers; her apparel green, overshaded with boughs; in the one hand a Scepter, in the other a Ball or Globe; and near to her a Chariot of four

wheels, drawn by four Lions.

By the Crown is fignified the habitations of the earth? by the greenness and boughs, the increase thereof; by the Scepter, the Kingdoms and Governments of the world; by the Ball, the roundness thereof; by the Chariot, the continual motion, change and alteration of things; by the Lions, the wisdom and strength of mankind, by which things are carried on and managed.

III. Isidorus faith, that this Goddess was painted holding a key in one of her hands: which shews, that in the winter the bowels of the earth are locked up by reafon of cold; which at the approach of Spring and

Summer is unlocked again.

IV. She was formetimes depicted in the form of an antient woman, having her head circumcinct with ears of corn, holding in her hand a poppey-head: drawn in a Chariot (as Orpheus faith) with two fierce and V. The untamed Dragons.

V. The earth is also called Ceres, which many have depicted with torches, lights and fire-brands in her hands; as Praxiteles in a temple, seated upon a promontory of Attica.

VI. She is also pictured in a long green mantle.

#### CHAP. XV.

How the Antients depicted Neptune and the Sea Gods.

I. N Episme among the Antients is depainted with feveral countenances, fornetimes with mild and pleafant looks, fornetimes with lowring and fad, and at other times with a mad, furious and angry aspect; naked, holding in his hand a filver trident or forked mace, standing upright in the concavity of a great Sea shell, forcibly drawn by two monstrous horses, which from the middle downwards have the proportion and shape of fishes, as Statius saith.

That variety of Aspects (according to Virgil and Homer) is given him from the Sea, in that it at sundry times steweth it self so: and the trident, the three Gulfs of the

Mediterranean Sea.

II. Sometimes he is depainted with a thin veil hanging over one of his shoulders, of a Cerulean or blew-ish colour.

III. Lucianus fetteth him down with marvellous long hair hanging down over his shoulders, of a very

fad and darkish colour.

Tet Servius and others affirm, that all the Gods of the Sea were for the most part in the shape of old men with white and heary hairs, proceeding from the froth or spume of the Sea.

IV. Plate describes him in a sumptuous Chariot, holding in one hand the reins of a bridle: in the other a whip, drawn by Sea-horses galloping.

V. Martianus describes him of a greenish complexion, wearing a white Crown: fignifying thereby the

spume and froth of the Sea.

VI. Glaucus (another Sea God) saith Philostratus, hath a long white beard and hair, soft and dropping about his shoulders, his eyes green and glistering; his brows full of wrinkles, and green spots; his breast all over-grown with greenish Sea-weed or moss, his belly, and from thence downwards fish-like, sull of fins and scales:

VII. Galatea (a Sea Goddes) is described (by the said Philostratus) to be drawn in a strange framed Chariot, by two mighty Dolphins, which were guided by two silver reins held in the hands of old Triton's daughters; over her head, a Canopy made of Purple, silk and silver, with her hair hanging carelessy over her shoulders. See her described as a Nymph; Chap. 32. Sect. 7.

VIII. Oceanus (the father of all the Sea Gods) faith Thates Milesius, is depainted, drawn on a glorious Charlot, accompanied and artended with a mighty company of Nymphs; with the face of an old man, and a

long white beard.

IX. Æolus is depainted with fwoln blub cheeks, like one that with main force strives to blow a blast; two small wings upon his shoulders, and a fiery high countenance.

He is called the God and Ruler of the winds, whose descriptions are in the thirty fourth Chapter of this

Book.

X. Thetis (another Sea Goddels) is depicted by the fixth Section of the two and thirtieth Chapter of this Book.

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XI. Nep-

in a blew or Sea-green mantle trimmed with Silver, riding in a blew Chariot, or on a Dolphin of a brown black colour, with a Silver trident in his hand.

#### CHAP. XVI.

#### How the Antients depicted Nemelis.

I. SHe was by Macrobins described with wings on her shoulders; hard by her side the rudder of a ship, she her self standing upright upon a round wheel; holding in her right hand a Golden ball, in the other a whip.

II. She is often depicted, holding a bridle of an

horse in one hand, and in the other a staff.

III. Chrysippus (as Aulus Gellius saith) described her like a young Virgin, beautiful and modest, with an eye prying round about her, for which cause the an-

cients called her the all discerning Lady.

This Nemelis, as Paulanias & Ammianus Marcellinus say, was held to be the Goddess of Punishments, who castigates the offences of Malefactors, with pains and torments according to their sins and demerits; and rewarding the vertuous with honour and dignities: she was the daughter of Justicia (who dwells and inhabits very secretly, within the house of Eternity, recording the offences of the wicked) and a most severe and cruel punisher of arrogancy and vain glory. Macrobius saith, that this Nemesis was adored among the Egyptians (by them called also Rhamnusia) as the revenger and chief enemy of Pride, Insolency and Haughtiness; and that she had erect and dedicated unto her, a most state by and magnifique statue of Marble.

CHAP.

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#### How the Antients depicted Pan.

I. DAn (the God of Flocks and Sheep) is from the middle upwards in proportion like a man, with his face ruddy and fanguine, being very hairy; his skin and breast covered with the skin of a spotted Doe or Leopard; in the one hand a shepherds hook, in the other a whiftle: from the middle downwards the perfect shape of a Goat, in thighs, legs and feet.

II Justine saith, that Pan's Statue was made in a Temple in Rome, near the hill Palatine, appearing to the view all naked, faving that it was flightly enthadowed and covered with a Goats skin.

Thereby is fignified that (as it was reputed in those dayes) Pan kept his habitation among Hills, Woods and Groves, who was indeed most of any adored and worshipped by shepherds, as he that had the peculiar care and Government of their flocks.

III. Goat-ear'd Pan, his small tipt new grown horns Advance themselves, about whose either side A flow'ry Garland twines, and there adorns His curled Temples with a wondrous Pride. His face is of a high and reddish blush, From which hangs down a stiff rough beard or bush. And for his bodies vesture he doth wear The finest skin of the most spotted Doe, That ever any in those woods did bear, Which from his shoulder loose hangs to his toe. And when he walks, he carries in his hand A Shepherds hook, made of a knotless wand. A 2 2

Servius faith, by the horns is fignified either the Beams of the Sun, or New of the Moon, at what time the is horned: his red face fignifies the element of fire: his long beard, the Air: his spotted garment, the starry firmament: his Shepherds hook, the rule and Government of nature.

IV. After the form of Pan were the Fanns, Sylvans, Satyres and Fairies fet forth, having little short horns growing on their heads, with small ears, and short tails.

These are held among some people in very great regard and observance, being of a wonderful speed in running. Plutarch writeth, that there was one of these brought and presented for a rare gift unto Sylla, as he returned from the

wars against Mithridates.

V. Plato understandeth by Pan, Reason and Knowledge; which is twofold; the one of a man, the other of a beast: by the upper part of Pan, he signifies truth, accompanied with Reason; which being Divine, lifteth man up towards Heaven; by the lower parts of him is signified the falseness, beastliness and rudeness of those, who living here in the World, are only delighted with the pleasures and soolish vanities thereof.

#### CHAP. XVIII.

How the Antients depicted Pluto.

1. M Arrianns faith, that Plane fitteth (in the lower region) majestically in a chair, holding in one of his hands a black imperial Scepter, and on his head a stately Crown; at whose left hand sitteth his wise Proserpina, attended with many Furies, and evil Spirits, and at whose feet lyeth chained the Dog Cerberus.

II. The

II. The Antients also have painted him in a Chariot, drawn with four furious black horses, from out whose fiery nostrils proceedeth thick and ill-savoured sinoak, as Claudianus saith.

III. Some fay, that his head is encircled with a garland of Cypress leaves; others with Narcissus leaves.

The first shew sadness and horror, used in burials, and about the dead: the other are more grateful, and are used

in memory of the untimely death of that youth.

IV. Charon (Pluto's Ferriman, which carries fouls over the three rivers of Hell, Achoron, Cocytus and Styx) is described old, yet exceeding strong, with a black mantle hanging loosely over his shoulders, as Boccace

and Servius fay,

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By Charon is understood time; and whereas he is supposed to have the transportation of souls from the one side of those rivers to the other; thereby is signified, that time, so soon as we are born and brought forth into the world, doth carry us along by little and little unto our deaths; and so setteth us ever those rivers, whose names by interpretation signific forrowfulness, for that we pass this life with misery and adversity.

V. He is also depicted with long, curled black hair;

in a robe of cloth of Gold.

#### CHAP. XIX.

How the Antients depitted the Parca, or Sifters.

I. THE Sisters which are called Parez, are said to attend upon Place, which are three, and are called Clotho, Lachesis and Arropos.

1I. Clotho takes the charge of the Births and nativities of mortals: Lachesis of all the rest of their life;

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and Atropos of their death, or departure out of this

world.

III. They are all three depicted fitting on a row, very busily employed in their several offices; the youngest Sister drawing out of a Distass a reasonable big thread: the second winding it about a wheel, and turning the same, till it becomes little and slender: the eldest (which is aged and decrepit) stood ready with her knife, when it should be spun, to cut it off.

IV. And they are described to be invested with white veils, and little Coronets on their heads, wreathed about with garlands, made of flowers of Narcissus.

## CHAP. XX.

How the Antients depicted Minerva, or Pallas.

I. M Inerva (as taken for Bellona) as Licophrones
faith, was depicted with a flaming fire-brand

in her hand by the Antients.

II. Most Writers have described Minerva in the shape of a young woman, of a lively and fresh countenance, yet of an angry look, fix'd stedsast eye of a blewish green colour, compleatly armed at all weapons, with a long Spear in the one hand, and in the other a Crystal shield, or target : upon her helmet a garland of Olive branches, and two children, Fear and Horror, by her side with naked knives in their hands, seeming to threaten one another.

III. Pausanias saith, that in Greece the statue of Minerua was made with an helmet, on the top of which was the shape of a Sphynx; and on the sides thereof,

two carved Griffins.

# Chap. 21. How the Antient's depicted Vulcan. 359

IV. Phidias making her statue in Greece, placed on

the top of her Helmet the form of a Cock.

V. She was also painted in Greece, fitting on a stool, and drawing forth little small threads from a distast; for that the Antients supposed her to be the Inventress of Spinning and the like.

VI. Laftly she is depicted with a blew mantle embroider'd with Silver: and is called the Goddess of

Wifdom.

#### CHAP. XXI.

How the Antients depicted Vulcan.

I. Volcan is depicted, standing, working and hammering in a Smiths forge, on the hill Atna, framing Thunderbols for Jupiter, and fashioning Arrows for the God of love. The opinions which the Antients had of Vulcan were various, in which respect he is shaped sometimes in one form, sometimes in another.

II. Some make him lame of one leg, of a very black and swarthy complexion, as it were all smooky; of a general ill shaped proportion in all his Lineaments; and because that he is the husband of Venns, often de-

picture her with him.

III. Alexander Neapolitanus relateth, that in one place of Egypt was erected the statue of Vulcan, which held in one of its hands; the true and lively proportion of a mole; and in his other hand a Thunderbolt.

The mole was so placed, because they thought he sent unspeakable numbers of moles among them, as a plague to them, which dideat, graw and destroy every thing which was good.

IV. He is also painted lame in a scarlet robe.

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#### CHAP. XXII.

#### How the Antients depicted Bacchus.

Hiloftratus faith, that his statue was framed in the likeness of a young man without a beard, of a corpulent and gross body, his face of an high colour and big; about his head a garland of Ivy leaves; upon his temples two small horns; and close by his fide a certain beaft, called a Leopard or Panther.

This description is drawn from the nature of wine, ( of which as the Poets feign, Bacchus is the God ) whose inventer and finder out was certainly Noah, which not only Moses, but also Josephus and Lactantius specially affirm; wherefore some suppose him to be this God

Bacchus.

II. Claudianus faith, that his Image or Statue is made all naked; thereby shewing the nakedness of those which abuse themselves with wine, by which they reveal and open those things which ought to be

concealed and kept hid.

III. Diodorus Siculus faith, that Bacchus among the Grecians was depicted in two feveral forms, the one of a very aged man, with a long beard, stiff and thick, the other of youthful years, of a pleasant and amorous aspect.

By the first is shewed the effects of the intemperate use of wine which overcomes nature, and brings with it old age : by the other how it cherishes & revives the heart used moderately.

IV. Macrobins faith, that Bacchus was framed sometimes in the likeness of a young child, sometimes of a youth, sometimes of a man; and sometimes in the likeness of decrepic old age.

By these was signified the four seasons of the year, the

vine being dedicated to Sol, in whom they all exist.

V. This Picture was made in the likeness of a Bull (among the Cyrenians, a people inhabiting the farther part of Persia.)

The reason hereof was because Proserpina (the daugh-

ter of Jove ) brought him forth in that form.

VI. Philostratus saith, that Bacchus was oftentimes drawn clothed in womens garments, and in a long purple robe; wearing upon his head a coronet of Roses, with companions and followers, all of them in like loose and wanton garments, fashioning themselves some like rural Nymphs, as the Dryades, Oreades, &c. some like Sea Nymphs, as the Nereides, Syrens, &c. some like Sargres; Fauns and Sylvans, &c.

The womens garments show that wine makes a man faint,

feeble, and unconstant like to a woman.

VII. Pansanias saith, that among the Eleans, the picture of Bacchus, was made with a long beard, and clothed with a long gown hanging to the seet; in one hand a sharp hook, and in the other a bowl of wine, and round about him many Vine-trees and other fruitful plants.

VIII. The Statue of Bacchus also was sometimes set forth and adorned with Coronets made of fig-tree leaves, in memory of a Nymph (as some say) called Psyche, which was by the Gods metamorphosed into

that plant.

In like manner, the Nymph Staphilis (on whom Bacchus was in like manner enamoured) was transformed into the Vine, from whence it is that those plants are so exceeding grateful and pleasant unso this. God.

IX. He is painted also with short brown curled hair, with a Leopardsskin, or in a green mantle, a

tawny face, with a wreath of Vine branches.

CHAP.

#### CHAP. XXIII.

How the Antients depicted Fortune.

I. Fortune was depicted by some with two faces, one white and well-favoured; the other black

and ugly.

And this was because it was held, that there were two Fortunes, the one good, from whom came riches, happiness, quiet, content and pleasure; the other bad, from whom came wars, afflictions, crosses, disasters, catamities, and all other miseries what sever.

II. The Thebeans made her in the shape of a woman; in one of her hands a young child, to wit, Pluto

or Riches.

So that in the hands of Fortune, they put the disposing of

Wealth, Honour, Glory, and all Happinesses.

III. Martianus describes her a young woman, alwayes moving; covered with a garment of the thinnest silk, her steps uncertain, never resting long in a place; carrying in her spacious lap the universal sulness of the treasures, riches, honour and glory of this world; which in hasty manner (with her hand) she offers; which offer, if not instantly received, was utterly lost, in her right hand a white wand, with which she smites such as offend her, slight her kindness, or are not nimble enough to receive them.

Oh cruel Fortune, stepdame to all joyes, That disinherit'st us from sweet content, Plunging our hopes in troubled Seas annoyes; Depriving us of that which nature lent!

When will thy proud insulting humour cease, T'as mage the sorrows of an only one? That free from care, its foul may live in peace, And not be metamorphos'd into ftone. But why entreat I thy unstable heart, Knowing thy greatest pleasure, thy delight Consists in aggravating mortals smart Porfor'd with woes, by venom of thy (pight? Tis what thou wilt, must stand, the rest must fall, All bumane Kings pay tribute to thy might: And this must rife, when pleaseth thee to call. The other perish in a woeful plight. And this is it, that chokes true vertues breath, Making it dye, though she immortal be: Fruitless it makes it ; subject unto death, To fatal darkness, where no eye can see. Oh come you mounded Souls, conjoin with me; In some adumbrate thicket let us dwell, Some place which yet the Heavens ne'r did fee, There let us build some despicable Cell. Strength, Beauty, perish: Honours fly away: And with estates, Friends vanish and decay.

IV. In a Temple in Greece, Fortune was made in the form of a grave Matron, clothed in a garment agreeable to such years, whose countenance seemed very sad; before her was placed the Image of a young Virgin of a beauteous and pleasant aspect, holding out her hand to another; behind these, the Image of a young child, leaning with one of its arms upon the Matron.

The Matron is that Fortune, which is already past; the young Virgin, that which now is: and the young child beyond them both, is that which is to come,

Y. Quintus Curtius saith, that among the people of

Scyllia, Fortune was depicted in the form of a woman without feet, having round about her at her right hand a number of little wings.

Being without feet, shews that she never stands sirms and the many wings shews that her gifts and favours are no sooner given, but are presently lost, and do as it were sty away

again, before they be fully possessed.

VI. Alexander Neapolitanus relateth, that in Greece, her Image was made wholly of Glass; to shew that her favours are brittle, and subject to sudden

decayes.

VII. Cebes the Philosopher resembled Fortune unto a Comedy, in which many Actors appear often as Kings and great Monarchs; and presently after become poor fishermen, slaves, bond-men, and the like.

VIII. Socrates compared her to a Theatre, or common meeting place, where without all order or observance men take their places and seats, without respect

to the dignity of any.

Hereby is shewed, that she (without respect of birth, worth, merit or state, ) blindly, unadvisedly, and without any order or reason, bestows felicities, riches and savours.

IX. In Egira, a City of Achaia, Fortune was drawn in the shape of a beautiful woman, who held in one of her hands a Cornucopia; in the other, the boy

Cupid.

By which is fignified (as Paulanias faith) that beamty without riches avails nothing: and indeed I may fay he is doubly fortunate, who in his love enjoys the fruition of both beauty and riches: but he is happy in the superlative degree, who with the other two meets with vertue and love also.

X. Giraldus faith, that Fortune was with some de-

Chap. 24. Of Depicting Truth, Peace, &c. 365 picted riding on a horse galloping; with which swiftness she seems to pass invisible, after whom followeth Definy with great wrath and sury, holding in her hand an Iron bow, and aiming to strike Fortune at the heart.

By her swift galloping, is signified her mutability. See Sect. 4. Chap. 28. where she is taken as one of the powers.

#### CHAP. XXIV.

How Vertue, Truth, Peace, Honour, Fame and Opinion were depicted.

I. V Ertue in Greece was made in the form of a Pilgrim, like a grave and auffere woman; fitting alone opon a four fequared frone, melancholy and leaning her head upon her knees.

Being a Pilgrim, shows she hath no resting place, secure abode, or certain habitation upon the earth: the form of her sitting, shows her life to be full of troubles, dangers, crosses, and miseries. See the 1. Section of Chap. 30. of this Book.

Hac angusta via horrendis scate undique monstris, Et vita innumeris est interclusa persclis.

Sed tamen incolumes hac virtus ducit alumnos, Extrema ut vitant ne pes hinc inde vacillet.

Proclamat longe spes, hic sunt digna laboris
Pramia, & excipient mordaces gaudia curas.

Pax, sincera quies nullo temeranda dolore,
Lactita hic habitain longum, sine sine, per avum.

Fierce Monsters do this narrow passage bound, And deadly dangers it encompass round. Yet vertue doth her Followers safely guide, Lest they should go astray on either side.

And

And Hope proclaims afar; lo here you shall Have Joy for Sorrow; honey for your gall. Here Peace and joyful rest for ever dwell, Which neither cross nor time shall ever quell.

II. Truth, saith Hippocrates, was framed in the similitude and likeness of a beautiful woman, attired with gravity and modesty: Philostratus saith that she remaineth in the cave of Amphiarus, cloathed all in white garments of a beautiful hue: Lucianus saith that her statue was made in the form of a young woman, habited in rags,, and base attire, with a superscription over her head, how she was mronged and abused by Fortune.

III. Peace, faith Aristophanes, was framed in the shape of a young woman, holding between her arms the Infant Plato, the God of Riches, and Ruler of the

lower Regions.

She is also called Concordia, and is a special friend to the Goddess Ceres, from whom comes the encrease of Fruits,

Corn, and other natriments. See Chap. 28.

IV. Honour is depicted with two wings on its shoulders; which as Alciatus saith, was made in the form of a little child, cloathed in a purple garment, having a Coronet or wreath of Laurel about his head; holding hand in hand the God Capid, who leads the child to the Goddess Vertue, which is depainted right over against it.

V. Fame is painted like a Lady, with great wings, and feeming to proffer a flight, and to mount from the Earth, and rove abroad: having her face full of eyes; and all over her garments an infinite number of ears and tongues. See the tenth Section of the twenty ninth

Chapter of this Book.

Chap. 25. Of depicting Silence, Sleep, &c. 367

VI. Opinion, faith Hippocrates, resembles a young woman, not altogether so fair and lovely as Truth, yet not deformed, or ill proportioned; being rather impudent than modestly bold in her demeanour, with her hand stretched forth to take whatsoever is offered and presented to her.

#### CHAP. XXV.

How Night, Sleep, Silence, Pleasure and fear were depicted.

I. N Ight (the mother of Sieep and Death.) was depicted by the Antients in form of an old woman, having two great wings growing on her shoulders, all coal black, and spread abroad, as if she seemed to offer a flight; and that she is drawn in a Chariot, whose wheels are made of Ebony: having a state tountenance, & an upper garment of a deep black, spotted all over with silver spots like stars, as Boccace saith. She is also depicted like an old woman in a black mantle

Spotted with Stars of Gold.

II. Sleep (the brother of Death) faith Hefind, was painted of a most sowr, lowring, and sad aspect; aged, and holding in her left hand a young child very beautiful, and in her right, another child, of a most swarthy, black and dull complexion, with legs and arms very crooked. Philostraus in a Tablet (which he made for Amphiarus) makes her like an aged woman, slothful and sluggish, cloathed with several garments, the under black, the upper white, holding in one of her hands, a horn pouring forth seed.

By the garment is fignified night and day; by the feed,

reft, ease and quiet.

III. Harpocrates (the God of Silence) called in Greek, Sigateon, was made, as Martianus and Apuhim fay, in likeness of a young child, who close to his lips held one of his fingers as a fign of fecrecy. Some portraict him without any face at all; all covered with the skin of a wolf, painted full of eyes and ears:

Shewing it to be good to fee and hear much, but to speak

little.

IV. Voluptia or Pleasure, was depainted a Lady, having a pale and lean countenance, fitting in a pontifical and majestick chair, embroidered and embosfed with flars of gold, treading and trampling upon Vertue.

V. Fear, faith Paulaniai, was shaped in several forms by the Antients; fometimes with the head of a Lion among the Grecians (as on the shield of Agamemnon:) and fometimes with the deformed face and body of a

woman.

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The Corinthians dedicated this Picture fo made unto the sons of Medea; which were flain for bringing fach fatal gifts to the daughter of old Creon, whereby the, and all that regal family perished, and were for ever extinct.

Aspents in akesher life on aged women fieldeland

black, the typer white bedingin one of her bands,

neder on with leas and arms very

a hour drobatement mon s

#### CHAP. XXVI.

How the Antients depicted several Wisemen and Philosophers, Lawgivers, Emperours, Kings and Queens.

I. S Idonius Apollinarius in the ninth Epistle of his ninth Book, saith, that the Philosopher Zensippus was painted with a crooked neck: Aratus with a neck bowed downwards: Zeno with a wrinkled forehead.

II. Epicurus was painted with a smooth skin: Diogenes with a hairy tough beard: Socrates with whitish bright hair.

III. Arifotte was painted with a stretched out arm: Zenocrates with a leg somewhat gathered up: Hera-

elitus, with his eyes that for crying.

with a mismen!

IV. Democritus with his hips open, as laughing: Chrysippus with his fingers close pressed together, for numbering: Euclid with his singers put asunder, for the space of measures.

V. In some ancient Bibles and many Pictures,

Mofes is described with horns.

"The ground of this absurdity was a mistake of the "Hebrew Text, in that of Moses descending from the "Mount, upon the nearness of the words, The Keren, Cornu, an hosn, and The Karan, Lucco, to shine. "The vulgar translation (of Exodus 34. 29. 35.) a "grees with the former, to wit; Ignorabat good cormuta esset facies ejus. Qui videbant faciem Moss esse "cornutam. The translation of Paulus Fagius is other "wise, viz. Moses nesciebat quod multus esset splendor "gloria vultus ejus. Et viderunt silii Israel quod multa B b

"esset claritas gloria faciei Moss. Tremelius and Ju"nius have it thus, ut ignoraret Mosche splendidam esse
"factam cutem faciei sua. Quod splendida facta esset
"cutis faciei Moschis: agreeing with the Septuagint,
"Abdicassy is ofts is Royallo is secosius, glorisicatus
"est aspectus cutis seu coloris faciei.

VI. But Moses is generally depicted with bright hair, a very beautiful Visage, with radiant scintillations about his head, in form of hoariness, which in

Painting is called Glory.

VII. Alexander the great, with brown hair, and a ruddy complexion, riding upon his horse; but by some

riding upon an Elephant.

The reason of this is hard to be discerned; for as much as I find not in history, that ever he used that beast in his Armics, much less in his own person: except it were for that remarkable battel which he fought with Porus King of India, wherein were many Elephants: In which himself (as Curtius, Arianus and Plutarch relate) was on horseback, the name of which heast jet lives, and is samous in history to this day.

VIII. Numa Pompilius with white hair Crowned with a Silver bend or Diadem; his robe crimfon trimmed with Gold; his mantle yellow trimmed with

Silver; his buskins watchet and filver.

IX. Aneas the Trojan Prince in a purple mantle

trimmed with Gold.

X. David (the King of Israel) with brown hair, a ruddy complexion, and a long beard.

XI. Elizabeth Queen of England, pale-faced, light

brown hair, and gray-eyed.

XII. Dido Queen of Carthage in a purple or scarlet mantle, her under-garments purple; a Golden Quiver; hair yellow, tyed up with spangles and knots of Gold.

XIII. Gu-

The Painting of the Sibyls. Chap. 27.

XIII. Gustavus Adolphus King of Sweden with vellow hair.

XIV. Mahomet the Turks great Prophet in garments

all of green.

XV. German Emperours in a Violet-coloured robe.

watchet, or light-coloured.

XVL Roman Emperours, with yellow Carrusters embroidered with Silver; the labels of their fleeves, and short bases of watchet; the under sleeves, and long stockings white; a Laurel wreath, with a Silver jewel before; and rays of Gold, iffuing from the wreath.

XVII. Pythagoras in white garments with a Crown

of Gold.

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XVIII. Empedocles, in Violet, murry, or purple, and fo generally the rest of the Grecian Philosophers.

XIX. Erasmus Roterdamus, yellow haired, gray-

eved, and fomewhat pale.

XXI. The Virgin Mary is commonly represented in Purple and Azure : John the Evangelift in Scarlet : John Baptist in a Hairy mantle: The rest of the Apostles, in Green or Crimson.

### CHAP. XXVII.

The Painting of the Sibyls.

I. C Ibylla Agrippina, a woman in years, in a rofeal garment.

II. Sibylla Libyca an elderly woman, crowned with a garland of flowers, in purple garments.

III. Sibylla Delphica, with a black garment, a young woman with a horn in her hand.

IV. Sibylla Phrygia in red garments, having an old Saturnian hard favoured face.

Bb 2 V. Sibylla V. Sibylla Herophila, a young woman very fair in a purple garment, and head covered with a vail of Lawn.

VI. Sibylla Europea, a comely young woman having a high, red-coloured face, a fine vail on her head, and clad in a garment of Gold work.

VII Sibylla Persica, with a white vail, and a golden

garment.

VIII. Sibylla Samia, a middle aged woman, clothed

in Willow weeds, having a palm in her hand.

IX. Sibylla Hellespontica, a young woman in green garments, with a round, lovely fresh coloured face; holding in her left hand a Book; and in her right hand a Pen.

X. Sibylla Tiburtina, an old woman in purple garments, of a hard visage, holding in her Apron the

books of the Sibylls.

These Sibylls for their Prophecies of Christ are in high esteem: they are ten in number, as Varro sairb; yet others make twelve, of which we are not satisfied; Boylardus in his Treatise of divination, besides these ten addeth two others, Epirotica and Ægyptia. Some, as Martianus, will have but two; Pliny and Solinus, but three; Ælian four; and Salmasius but the sirst seven. They are generally described as young women, yet some were old, as she that sold the books unto Tarquin, from whence we conclude the Licentia pictoria is very large.

#### CHAP. XXVIII.

The Painting of Arts, Vertues, Passions and minor Gods.

I. A Richmetick is painted in cloth of Gold: Geometry fallow faced, a green mantle fringed with Silver, and a Silver wand in her right hand: Aftronomy with a Silver Creffant on her fore-head, an azure mantle, a watchet Scarf, with gold Stars.

II. Faith is painted in white garments, with a cup of Gold: Hope in blew, with a Silver Anchor: Charity in yellow robes; on her head a tyre of Gold with pre-

cious stones; her chair Ivory.

III. Religion in a Silver vail, with a garment, or mantle of white: Justice in a white robe, and a white mantle; with a Coroner of Silver and white buskins:

Innocency in white.

IV. Concord in a sky-coloured robe, and a yellow mantle; Peace in white, feattered with stars, or a carnation mantle fringed with Gold, a vail of Silver, green buskins, and a palm in her hand in black: Unanimity in a blew robe, mantle and buskins; with a chaplet of blew Lillies.

V. Wisdom in a white robe, blew mantle, seeded with stars: Law in purple robes, seeded with Golden stars; a mantle of Carnation fringed with Gold; purple and yellow buskins: Government in Armour.

VI. Watchfulnels in a yellow robe: a fable mantle fringed with Silver, and feeded with waking eyes as chaplet of turnfole, in her right hand a Lamp; in her left, a Bell: Confidence in a parti-coloured garment: Madefty in blew.

B b 3

VII. Eternity

VII. Eternity in blew, feeded with Golden stars; the Soul in white garments, branched with Gold and Pearl; and crowned with a Garland of Roses: Felicity, in purple trimmed with Silver.

VIII. Love in Crimson fringed with Gold, a stame-coloured mantle, a Chaplet of red and white Roses: Natural affection, in Citron colour: Envy, in a disco-

loured garment full of eyes.

IX. For, in a green robe, and a mantle of divers colours, embroidered with flowers; a garland of Myrtle; in her right hand a Crystal Crusse, in her left a Golden Cup: Pleasure in light garments, trimmed with Silver and Gold: Laughter in several colours.

X. Wit, in a discoloured mantle: follity, in flame colour: Pastime in purple trimmed with

Gold.

X!. Opinion in black Velvet, black cap, with a white fall: Impudence, in a party-coloured garment: Audaeity, in blewish colour.

XII. Honour, in a purple robe, wrought with

Gold: Liberty, in white: Safety, in Carnation.

XIII. Cupid was painted (by Zenxis) in a green robe: Hymen, in long yellow hair, in a purple or Saffron coloured mantle: Triton (Neptunes Trumpeter) with a blew skin, in a purple mantle.

XIV. Urania, in a mantle of azure, filled with lamps: Afrea the Goddess of Justice, in a Crimfon mantle, trimmed with Silver: the Graces all

alike, as Sifters, in Silver robes.

XV. Tellus, the Goddess of the Earth in a green mantle: Ceres, with yellow hair, and a straw-co-loured mantle trimmed with Silver: Vesta, daughter of Saturn, in white garments filled with stames.

XVI. Flora

XVI. Flora in a mantle, of divers colours: Profer pine in a black mantle, trimmed with Gold flames: Echo, (the Goddess of the Air, and daughter of speech, the intirely beloved of Pan) is an invisible Goddess.

XVII. Ausonus Gallus reporteth that she hath oftentimes dissipated, and reprehended such, who would undertake to depaint her, and repeats the same in an

Epigram, whose sence in English is this:

Surcease them medling Artist thy endeavour,
Who for thy skill hast reap't such long liv'd fame:
Strive not to paint my body, shape, for never
Did any humane Eyes behold the same.
In concave caverns of the Earth I dwell,
Daughter o'th' Air, and of each tailing voice,
In Woods and hollow dales I build my Cell,
Joying to re-report the least heard noise,
To grief opprest, and men disconsolate,
That tell each grove their souls vexation,
Their dying agonies I aggravate,
By their dole accents iteration.
And he that will describe my form aright,
Must shape a formless sound or airy sprite.

#### CHAP. XXIX.

To express the Powers.

I. L'ady, having three heads, fignifying Time past, present, and to come; in her lest hand a Circle, pointing with the fore finger of her right hand up to Heaven: the Circle fignishes she hath neither beginning nor end.

B b 4

In the Medals of Trajan, the was figured red, firting upon a Sphear, with the Suu in one Hand, and the Moon in the other: (by her fitting is signified perpetual constancy.)

In the Adedals of Faustina, she is drawn with a Vail,

and in her right-Hand the Globe of the World.

Boccace, writing of the Progeny of the Gods, faith that the Antients derived it from Demogorgon, as the principal and first of them all, who inhabited in the middle or Center of the Earth, encircled round about, and circumvested with a dark and obsurcate cloud, breathing from his mouth, a certain liquid humidity.

But however what Eternity is the name doth clearly discover, containing in it self all Worlds and Ages, and not limi-

ted, or measured by any space of time.

Claudius describes it by a Serpent that encompasseth round with her body, the Cave or Den wherein it lyeth, so as making a Circle, she holds inher mouth the end of her tail, which with the Agyptians was the emblem of a year.

All in a Circle thus she sits involved, Whose firm tenacity is ner dissolved: She sends forth times, and them recals again, Ages to come, and past she doth retain.

But according to Boccace, as Eternity hath an absolute command over all times, so she lives far hence in some remote and unknown vale, where humane steps never approached, but is even unfound out of the coelestial inhabitants, those happy Souls, who stand before the presence of the greatest, that only knows all things.

II. Time, It is drawn flanding upon an old ruine, winged, and with Iron teeth. Or thus, An old man in a garment of stars; upon his head a Garland of Roses,

Ears

Ears of Corn, and dry Sticks, standing upon the Zodiack, with a looking-Glass in his Hand; two Children at his Feet, the one fat, the other lean, writing both in one Book; upon the Head of one the Sun, upon the other the Moon. Or thus, An old Man, bald behind, winged, with a Scithe and an Hour-Glass, having a lock of Hair on his Forehead.

III. Fate, A Man in a fair, long, flaxen Robe, looking upwards to two bright Stars encompassed with thick Clouds, from whence hangs a golden

Chain.

IV. Fortune, A naked Lady having an Enfign or Sail overshadowingher, standing upon a Globe or

Ball.

Lactantius saith that Fortune is a vain, idle and senseless name, sheming forth Mans weakness in attributing any thing thereto: which Marcus Tullius confirmeth, where he saith, That this name of Fortune, was first brought in to cover the ignorance of Man. Alexander Neopolitanus saith that in Præneste in a Temple she was depicted in the shape and form of two Sisters, both conjoyned in one and the same Statue. Pausanias saith, That her most ancient Statue was that which Bupalus made in Greece in shape of a Woman, upon whose Head was a round Ball, and in one of her Hands a Cornucopia, She is called the blind Goddess, and partial Lady, by reason of the bestowing of her unconstant and mutable Favours.

Imperious Ruler of the Worlds defigns,
Lady of Solace, Pleasure and of Pains:
Like Tennis Balls thou beat'st us to and fro,
From Favours to difgrace, from joy to woe;
From Wars to Peace, from Rule to be commanded:
But with unconstancy thou now art branded.

Macrobius saith she was set forth with Wings on her Shoulders, ( to shew that she was alwayes at Hand among Men') had by her side the Rudder of a Ship ( to shew that the doth rule and command) her felf placed upon a Wheel, holding in her right-Hand a golden Ball, and in the other a Whip; (hewing where the Smiled, Wealth and Homour, and where the frowned, Croffes and Mifery thould follow.

In Ægypt Fortune was depicted like a Lady turning a great Glass Wheel, on whose top were many Men playing. others climbing up; and others having attained it, precipi-

tating themselves and falling down back again,

V. Equality, A Lady lighting two Torches at once. VI. Victory. Is expressed by a Lady clad all in Gold. in one Hand a Helmet, in the other a Pomegranate: By the Helmet is meant Force, by the Pomegranate unity of Wit and Counfel.

Augustus drew her with Wings ready to fly, standing upon a Globe, with a Garland of Bayes in one hand, in the other a Coronet of the Emperor, with these Words Imperator Cæfar. In the Medals of Octavius, she is drawn with Wings, standing on a Base, in one Hand a Palm, in the

other a Crown of Gold.

VII. Peace, Is drawn like a Lady, holding in her right-Hand a Wand or Rod downwards towards the Earth, over a hideous Serpent of fundry colours; and with her other Hand covering her Face with a Veil, as loth to behold Strife or War.

Trajan gave a Lady in her right-Hand an Olive Branch, in her left a Cornucopia. In the Medals of Titus, a Lady having in one Hand an Olive Branch, the other leading a Lamb and a Wolf coupled by the Necks in one Yoke. Olive was alwayes the Emblem of Peace.

VIII. Providence, A Lady lifting up both her Hands to Heaven with these Words, Providentia Deorum. Or

thus,

thus, A Lady in a Robe, in her right-Hand a Scepter, in her left a Cornucopia, with a Globe at her Feet.

IX. Concord, A Lady fitting, in her right-Hand a charger for Sacrifice, in her left a Cornucopia, with the Word Concordia. Or thus, A fair Virgin, holding in one Hand a Pomegranate; in the other a Mirtle Bunch.

The nature of these Trees are such, that if planted though a good space one from another, they will meet, and with twi-

ming embrace one another.

X. Fame, A Lady clad in a thin and light Garment, open to the middle Thigh, that the might run the faster; two exceeding large Wings; Garments embroidered with Eyes and Ears, and blowing of a Trumpet.

XI. Destiny, A Lady, who with great fury, and exceeding celerity holds in her Hand an Iron Bow ready bent, aiming to strike Fortune even at the very

Heart.

Destiny and Fortune can never agree; and therefore as Fortune slies from destiny, so Destiny pursues Fortune; for where Destiny sets Foot, there Fortune is as it were in chanted and conjured, as having no power, efficacy or vertue.

#### CHAP. XXX.

Of Vertues and Vices.

I. V Ertue is represented by Hercules, naked, with his Lyons Skin, and knotted club, performing some one of his Labours; as offering to strike a Dragon keeping an Apple-tree: or holding in his Hand three golden Apples.

Hercules

Hercules is nothing else but Vertue, his name in the Grock towne is 'Hearnis, quasi wegs rreds, Junonis gloria: vel quia rrison res newas celebrat aut commemorat Heroas, which is the property of Vertue: be is drawn naked to demonstrate her simplicity: by the dragon is set forth all manner of vices: by the Lions skin, magnanimity and greatness: by his Oaken Club, Reason and Policy: by its knottiness, the difficulty, pains and labour in seeking after vertue: by the three golden Apples, the three Heroical Vertues, Moderation, Content and Labour.

II. Piety is drawn like a Lady, with a fober countenance; in her right hand she holdeth a sword stretched over an Altar; in her left hand a Stork; and by her

fide is placed an Elephant and a Child.

The Stork is so called of sogyn, the reciprocal or mutual love of Parent and Child, of which this bird was ever an Emblem, for the love and care she hath of her parents heing old. The Elephant worships towards the rising of the San.

III. Hope is drawn like a beautiful child in a long robe hanging loofe, ftanding upon tiptoes and a crefoyl or three-leaved grafs in its right hand, in its left

an Anchor.

The loofe vestment shews, she never pincheth or binds truth, standing on tiptoes shews she always standeth dangerously; the branch of trefoyl shews knowledge (the ground of faith) faith (the ground of hope) and hope it self.

IV. Mercy, a Lady fitting upon a Lion, holding in one hand a Spear, in the other an Arrow; which she

feemeth to cast away.

In the Medals of Vitellius she sits with a branch of Bays

in her hand, and a staff lying by her.

V. Justice, a fair young Virgin, drawing after her, with her left hand a black, hard, ill-favoured Woman,

man, haling her by main force, and Ariking her over

the face in a fevere manner.

The young Virgin was Instice, the other Injuria: she is drawn young and a Virgin, to shew, that sudges and administrators of Law ought to be incorrupt and free from bribes, partiality or slattery, but just, constant and sincere. VI. Felicity, a Lady sitting in an imperial throne, in the one hand she holdeth a Caduceus or Rod, in the other hand a Cornucopia.

VH. Fristfulness, a Lady sitting upon a bed, and

two little infants hanging about her neck.

VIII. Dissimulation, a Lady wearing a vizard of two faces, in a long robe of changeable colour; and in her right hand a Magpye.

IX. Security, a Lady leaning against a pillar, before

an Altar, with a Scepter in her hand

X. Calimina, a beautiful, rictrand young woman, approaching towards a Judge, gorgeous in her habit, with an angry, scomful and discontented look, and red and fiery eyes; she holds in her left hand a flaming torch: and with her right she by force draws a young man by the hair of the head.

XI. Envie, a wonderful lean old man, with a pale and meagre face, in whose withered cheeks Age bath

wrought deep furrows and wrinkles.

XII. Penience, a Woman in vile, ragged and base attire, infinitely deploring her being: and bemoaning her felf in passionate his above all measure, continually weeping.

#### CHAP. XXXI.

## Of Rivers.

I HErein you ought to observe the Adjuncts and Properties of the same; which consists in some notable Accident done near them; some samous City, trees, fruits, or reeds situate upon their banks; some sish only proper to their streams; or recourse of shipping from all parts of the world.

II. Therefore you had best place the City upon their heads; their fruits in a Cornucopia; reeds, flowers and branches of trees in their Garlands, and the like.

III. The River Tiber. It is expressed (in the Vatican in Rome) in a goodly Statue of Marble lying along (for so you must draw them) holding under his right arma she wolf, with two little infants sucking at her teats, leaning upon an Urn or Pitcher, out of which issueth its stream: in his left a Cornucopia of delicate fruits, with a grave Countenance and long beard; a garland of slowers upon his head; and resting his right leg upon an Oar.

IV. The River Nilus. It is feen (in the Vatican) cut out in white Marble, with a garland of fundry fruits and flowers, leaning with his left arm upon a Sphynx; from under his body iffueth its stream; in his left arm a Cornucopia full of fruits and flowers on one fide, with fixteen little children, smilling and pointing to

the flood.

The Sphynx was sometimes a monster which remained by Nilus: the Crocodile àmò is neonos denia, from his hatred of Saffron, the most samous monster of Egypt: the sixteen children, the sixteen cubits of height, the uttermost

of the flowing of Nilus: their smiling looks, the profit of it, which glads the hearts of the Sun-burnt inhabitants.

V. The River Tigris. It was drawn like an old man (as the rest) and by his side a Tiger.

This beast was given as well for its sierce streams, as

for the store of Tigers which are there.

VI. The River Ganges. It bears the shape of a rude and barbarous savage, with bended brows, of a fierce and cruel Countenance, crowned with a palm, having, as other floods, his pitcher, and by his sides a Rhimogeres.

This River runneth through India, and hath its bead

from a fountain in Paradife.

VII. The River Indus. It is drawn with a grave and jovial aspect, with a garland of its countrey flowers, by its side a Camel (from ¿auai ) it is represented pleasantly, grave, as an Emblem of the Indian policy.

This is the greatest River in the world, receiving into its channel threescore other great and tamons Rivers, and

above an hundred leffer.

VIII. The River Thames. In the house of an honourable friend, I say the Thames thus drawn: A Captain or Soldier lying along, holding in his right hand a Sword, and under his arm the August Tower in the other a Cornucopia of all fragrancies, with a Golden chain which held four Crowns; and with this he encompassed the streams, from under which bending of his left arm they seemed to flow: his temples were adorned with Bays, the River was empaled on one side with Anchors, and on the other stood Casar's Augusta.

IX. The River Arms. It is a famous River in Italy, drawn like an old man leaning upon his pitcher, pouring out water: upon his head a garland of Beech, by

his right fide a Lyon, holding forth in his dexter paw a red Lilly or Flower-de-luce, the antient Arms of the chief City of Tuscam.

By the garland of Beech is set forth the great abundance of Beech trees growing about Fasterona in the Appennines

where Arnus hath his head.

X The River Po or Padus. It is depicted with an Ox's face, having a garland of Reeds or Poplar on

his head.

It is so called from the Sister of Phaeton, whom the Poets feign destroyed with lightning, and drowned here: the head of the Ox, is from its horrid noise and rearing, whose crooked banks resemble the horns thereof; by the sides whereof grows much Reed and many Poplars.

XI. The River Danabius. In the antient Medal of the Emperour Trajan, it is depicted with its heads

covered with a veil.

It is so drawn, because its head or first spring is unknown. Ausonius saith,

# Danubius periit caput occultatus in ore.

XII. The River Achelous. Ovid describes it with a garland of Reeds, Willow, and the like: having two Urns or Earthen Pitchers, the one empty, the other casting out water; and upon its head two horns, the

one whole, the other broken.

This River as it is the most famous of all Greece, so it divides Atolia from Arcacia, and then fulls into the Sea. This is fetch'd from the fable of Hercules who combated him in the likeness of a Bull, and brake one of his horns for Deianira's sake, there turning both its streams into one, whereupon one of the Urns is empty.

XIII. The River Niger. It is drawn like a Black-Moor, with Glory, or a Coronet of Sun-beams

falling

falling upon his Urn, having by its side a Lyon.

By the Sun-beams and black, is shewed the clime,
lying under the torrid Zone, whose inhabitants are Blacks
or Moors; the Lyon is that which the Countreys Mauritania
and Barbary breed, being the siercest in the World.

## CHAP. XXXII.

# Of Nymphs.

I. N'MoH Nympha, a bride (from velv & calvesas, as it were a fresh or new creature: or as
fome will have it, from Nympha quasi Lympha, by changing L. into N. after the Dorick dialett:) it is nothing
else but an Allegory, from the Vegetative humidity,
which gives life to trees, herbs, plants, and slowers, by
which they grow and increase.

II. They are feigned to be the daughters of the Ocean, the mother of floods, the nurses of Bacchus, and goddesses of fields, who have the protection and charge of mountains, herbs, woods, meadows, rivers, trees,

and generally of the whole life of man.

III. First, Napaæ, Nymphs of the Mountains.

Let them be drawn of a sweet and gracious aspect, in green mantles girded about in the middle; and upon their heads garlands of honeysuckles, wildroses, tyme and the like; their actions, dancing in a ring, making garlands, or gathering flowers.

They are so called from Nanos the top of an bill, or woody

valley.

IV. Secondly, Dryades, Nymphs of the woods.

Draw these less fair than the former, of a brown or tawny complexion, hair thick like moss, and their attire of a dark green.

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They are so called from Doùs an Oak, having their beginning with trees and dying again with them.

V. Thirdly, Naiades, Nymphs of the floods.

Draw them beautiful, with arms and legs naked, their hair clear as Crystal; upon their heads garlands of water cresses, with red leaves: their actions, pouring out water.

They are so called from New to flow, or bubble, as water

doth.

VI. Thetis, a Lady of a brown complexion, her hair scattered about her shoulders, crowned with a Coronet of Periwinkle and Escallop shells, in a mantle of Sea-green, with chains and bracelets of Amber about her Neck and Arms, and a branch of red Coral in her head.

in her hand.

VII. Galatea, a most beautiful young Virgin, her hair carelesty falling about her shoulders like silver threads, and at each ear a fair pearl; with a double string of them (sometimes) about her Neck and left Arm; a mantle of pure thin and sine white, waving as it were by the gentle breathing of the air, viewing in her hand a spunge made of Sea-froth, she is so called from pala, lae, milk.

VIII. Iris, a Nymph with large wings, extended like to a femicircle, the plumes fet in rows of divers colours, as yellow, green, red, blew or purple; her hair hanging before her eyes, her breafts like clouds, drops of water falling from her body, and in her hand Iris,

or the Flower-de-luce.

Virgil makes her the messenger of funo (where she is taken for the air) when he saith, Irin de Calo missi

Saturnia Juno.

IX. Nymphe Diane; Let them be cloathed in white linnen to denote their Virginity, and their garments girt about them; their Arms and shoulders naked;

naked; bows in their hands, and arrows by their fides. X. Aurora, the Morning. A young Virgin with carnation wings and a yellow mantle; in her forehead a star, and Golden Sun-beams from the Crown of her head, riding upon Pegasus, with a viol of dew in one hand, and various flowers in the other, which she scattereth upon the earth.

## CHAP. XXXIII.

Of the Nine Muses.

L. C. Lio, She is drawn with a Coronet of Bays; in her right hand a Trumpet; in her left a Book, upon which may be written Historia; her name is from praise or glory.

II Enterpe, is crowned with a garland of flowers; holding in each hand fundry wind-instruments; her

name is from giving delight.

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III. Thatia. Draw her with a fmiling look, and upon her Temples'a Coronet of Ivy, a Mantle of Carnation embroidered with filver twift and gold spangles, and in her left hand a vizard; her Ivy sliews she is mustrift of Comical Poesie.

IV. Melpomene. Draw her like a Virago, with a majestick and grave countenance, adorn her head with Pearls, Diamonds and Rubies; holding in her left hand Scepters with Crowns upon them, other Crowns and Scepters lying at her feet: and in her right hand a naked Poniard, in a Mantle of changeable Crimson. Her gravity besits Tragick Poesie.

V. Polyphymnia. Draw her acting a Speech with her fore-finger, all in white, her hair hanging loofe about her shoulders of an orient yellow, upon her head a gar-

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land of the choicest Jewels intermixt with Flowers. and in her left Hand a Book, upon which let be written Suadere; her name imports Memory to

whom the Rhetorician is beholden.

VI. Erato. She hath her name from Egos, Amor. Love: draw her with a fweet and comely vilage, her Temples girt with Myrtles and Rofes, bearing an Heart with an Ivory Key; by her fide Cupid, winged, with a lighted Torch; at his Back, his Bow and Quivers.

VII. Terpsicore; a cheerful Visage playing upon fome Instrument; upon her Head a Coronet of Feathers of fundry Colours, but chiefly green; in token of the victory which the Muses got over the Syrens.

&c. by finging.

VIII. Brania. A beautiful Lady in an azure Robe; upon her Head a Coronet of bright Stars; in her right-Hand the Coelestial Globe, and in her left the Terrestrial. Her name imports as much as Heavenly; Urania Culi moins strutatur & Aftra.

IX. Caliope. Upon her Head draw a Coronet of Gold; upon her left-Arm Garlands of Bayes in store, for the reward of Poets; and in her right-Hand three Books, upon which write Homerus, Vir-

gihus, Ovidius.

The Muses had their names, as Eusebius faith, mues To musik, which is to instruct, because they teach the most bonest and laudable disciplines.

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# CHAP. XXXIV.

Of the four Winds.

I. E Drus, the East-wind. Draw a Youth with puffed and blown Cheeks (as all the other Winds must be) Wings upon his Shoulders, his Body like a Tawny-Moor, upon his Head a Red Sun.

II. Zephyrus, the Welt-wind. Draw a youth with a merry look, holding in his Hand a Swan, with Wings display'd as about to sing, on his Head a Garland of all forts of Flowers.

Tis called Zephyrus quali Zwin pagar, bringing life,

because it cherisbeth and quickneth.

III. Boreas, the North-wind. Draw it like an old Man, with a horrid, terrible look; his Hair and Beard covered with Snow, or the hoar-Frost; with the Feer and Tail of a Serpent.

IV. Auster, the South-wind, is drawn with Head and Wings wet, a Pot or Urn pouring forth Water, with which descend Frogs, Grashoppers, and the like Creatures, which are bred by moisture.

# CHAP. XXXV.

Of the Menths of the Year,

I. T Anuary must be drawn all in white, like snow or hoar Frost blowing his Fingers; in his left Arm a Billet, and Aquarius standing by his side

II. February is drawn in a darkskie colour carrying

in his right-Hand Pifces, or Fishes.

III. March Cc3

III. March is drawn tawny with a fierce look, a Helmet upon his Head, leaning upon a Spade: in his right-Hand Aries; in his left Ahmond Bloffoms and Scions; and upon his Arm a Basket of Garden-Seeds.

IV. April is drawn like a young Man in green, with a Garland of Myrtle and Hawthorn-buds, winged; in the one handPrimrofes andViolets in the other Taurus.

V. May is drawn with a fiveer and lovely afpect, in a Robe of white and green, embroidered with Daffadills, Haw-thorn and Blew-bottles; on his Head a Garland of white, red, Damask-roses; in the one Hand a Lute; upon the fore-finger of the other a Nightingal.

VI. June is drawn in a Mantle of dark grafs-green; upon his Head a Coronet of Bents, King-cobs, and Maiden-hair; in his left-Hand an Angle; in his right Cancer; and upon his Arm a basket of Summer Fruits.

VII. July is drawn in a Jacket of a light yellow, eating Cherries, with his Face and Bosome Sun-burnt, on his Head a Garland of Centaury and Time, on his Shoulder a Sithe; with a Bottle at his Girdle, carrying a Lion.

VIII. August is like a young Man of a fierce look, in a stame-coloured Robe; upon his Head a Garland of Wheat; upon his Arm a Basket of Summer fruits;

at his Belt a Sickle, bearing a Virgin.

IX. September is drawn in a purple Robe, with a cheerful look, and on his Head a Coronet of white and purple Grapes; in his left-Hand a handful of Oats, with a Coroneopia of Pomegranates and other Summer Fruits; and in his right-Hand a Ballance.

X. October is drawn the garment of the colour of decaying flowers and leaves; upon his head a garland of Oak-leaves with the Acorns; in his right-hand a Scorpion; in his left, a basket of Services, Medlars and Cheffauts.

Chap. 35. Of the Months of the Year. 391

XI. November in a Robe of changeable green and black: upon his Head, a Garland of Olives with the Fruit, in his right-Hand Sagittarius: and in his left

bunches of Parinips and Turneps.

XII. December is drawn with a horrid afpect, clad in an Irish rug, or course Freeze girt about him: upon his Head three or four night-Caps, and over them a Turkish Turbant; his Nose red, Beard hung with Iceikles; at his back a bundle of Holly and Ivy, holding in furred mittens a Goat.

Where note, it will be good to give every Month its proper and natural Landship; not making Blossoms and Fruits upon Trees in December; nor a barren face of the Earth and

Trees in June.

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The end of the Fourth Book.

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# POLTGRAPHICES

# LIBER QUINTUS.

An Idea of the Arts of Beautifying,
Perfuming, Alchymy and
Chiromancie.

#### CHAP. I.

Of Painting of the Face and Skin.

I. WO wayes there be of adorning of the Face and Skin; the first is by Painting: the second is, by application of excellent Cosmeticks, which give a very natural, absolute and lasting beauty.

The first way, which is that of Painting, is the subject matter of this Chapter. Some may wonder that we should meddle with such a Subject as this, in this place; but let such know; the painting of a deformed Face, and the licking over of an old, withered, wrinkled and weather-beaten Skin, are as pro-

per appendices to a Painter, as the rectification of his Errors in a piece of Canvase: Nor is there any reason, but that the Artist should shew his care in the one, as well as to expose his skill in the other, since a single deformity in the body, begets a complication of miseries in the mind, and a unity of defects, a multipli-

cation of Evils.

And though some think the Poets did not much amils, to fancy the creature to be hatcht in Hell, by reason it brings with it such a torrent of dejections, yet let those darkned Souls, (who are so much affrighted at its cloudy adumbrations) understand, that when time shall have made its full revolution, themselves may be the product of such a conception: But we confess, it seeks darkness, and only sollaces it self in obscurity and dusky solitudes. For such whose bodies have past the stamp with some faults, and have missed the impressions or resections of beauty, which might make them delectable in humane fociety, ever make choice of darkness as their chief companion, Deformity is a disease esteemed the most pernicious, and its iffue is a matter of dangerous confequence, chiefly obstructions to Ladies Preferment. Now to prevent this danger to take away these obstructions and to deliver you from the embraces of fo hideous a monster (which fome efteem as a Fury of Hell) these Cosmeticks we have offered upon the Altar of your defects; protesting that the use of these beautifiers, will make you as fit for the enterrainment of Courtiers, as ever you were before for the courtship of Grooms or Hoftlers. and make your ruft, Skins and ill-looked Faces, to outthine with a radiant lustre, the most splendid of all the Nymphs of Diana. Though you may look so much like the Image of death, as that your Skins might be taken for your Winding-sheets, yet by our directions you

you may attain fuch a rolid colour, and fuch a lively cheerfulness, as shall not only make you look like natures workmanship, but also put admiration into the beholders, and fix them in a belief, that you are the first-fruits of the resurrection. Thus we teach you lippid mortalls to retrace the steps of youthfulness, and to transform the wrinkled hide of Hecuba, into the tender skin of the greatest of beauties; which then you will dull by the advance of your Features, and make all conceited shadows of glory, to vanish in your prefence. When once your artificial heat shall appear. others shall seem pale with envy for your perfections; and their natural ruddiness shall only serve them to blush, to see their features clouded by your splendor, who will feem like brown bread compared with Mancher.or rather like wooden diffies upon a shelf of China ware or as another once faid, like blubber'd jugs in a cupboard of Venice glasses, or as earthen pils pots in a Goldsmiths shop. By this means your sparkling Glories shall fire Platonick Lovers, so that none though as cold as Saturn, shall be able to refift your actuating flames, but shall force the stoutest heart, to be a Sacrifice to love. If any remain unscorched, it must be only those leaden hearted Cowards, who dare not approach your flames, for fear of melting; or those undeferving fouldiers of Venus (of a frigid constitution) who dare not so much as look upon your youthful fire. for fear of being burnt to ashes. But it may chance that some one or other, may condemn your hearts for evil, because you strive to make your faces good, and may like your in-fide the worle, because your outside may look fo well; yet with Benjamin, refuse not the many messes of Pottage, nor yet the many changes of Raiment (although one might well enough serve your turn ) but receive them from the hands of fofeph, though though all the rest of the company be angry. Avoid not company for want of beauty, when Art affords an innocent supply, but with confidence crucifie that evil conscience, which forbids the use of a little oyl to make a cheerful countenance, and the drinking of a little wine to make a merry heart. Borrow our Artiscial beautisiers, and become splendid, that you may be sit to be gathered by the hand of some metamorphosed there; lest in the garden of Deformities, growing green with sickness, you should be taken for thisses, and so cropp'd by Asses.

II. To cleanfe the face and skin.

Before any thing be used to paint, or make the skin beautiful, it must be made very clean thus: first wash with warm water, and sweet scented wash-balls very well; then rub the Face with a cloth, and wash well with water in which Wheat-bran is boiled; so is the skin prepared.

Or thus, Take Sublimate one ounce, glair of fix eggs, boil them in a glass veffel, till they grow thick, then press out the water, with which wash the skin.

III. To make a white Fucus or Paint.

Take Talk and powder it, by beating of it in a hot mortar, to the powder of Talk add diffilled Vinegar, boil it at a gentle fire in a wide glass, let the fat froth that fwims at top, be taken off with a spoon; then evaporate the Vinegar, and mix the remaining cream with slegm of common Salt; or a little Pomatum, with which wash or anoint the face, and it will beautise it much.

IV. Another very excellent.

Take Crude Talk in powder one ounce, oil of Camphire two ounces, digelt till the oil is white; it is a noble Fuens for Ladies faces.

V. To make the aforesaid oil of Camphire.

Take Camphire four ounces, Bole twelve ounces, make them into balls and dry them in the Sun, then diffil them in Sand in a glafs retort, into a receiver that hath diffilled rain water therein: first there will come forth a white matter, which melts in the Alembick, and falls into the Receiver, then a clearer water; and at last with a stronger fire, the oil we speak of, sweet scented, which rectified with spirit of wine will be yellow as Gold.

VI. Another excellent Facus made of Pearl.

Diffolve Pearl in diffilled Vinegar, precipitate with oil of Sulphur per Camputan; then (weeven and digest with spirit of wine; abstract the spirit; and you have a magisterial Fucus will melt like Burrer.

VII. To make the best Fucus or Paint as yet known,

Take Venetian Talk, cleave it into flices, digeft it in the heat of the Sun, or of a horse-dunghil for a month, with distilled vinegar, made of Spanish wine, adding every day new distilled vinegar to the former, till the vinegar be muchaginous; which then distil by a luted retort and a large receiver with a naked fire. First there comes forth the vinegar; then a white oil, which separate. After you have cleaned the skin by the second Section, then first wash with the vinegar, after amoint with the oilsist the sace be first well wash'd from all impurity, this one anoisting may hold for a month without facing. This Cosmerick if rightly prepared, is worth about five pound an sance.

VIII. An excellent Fucus made of Bulls gall.

Take Bulls galls dryed in the Sun, whole incture extract with spirit of wine, with which before at the face, (being cleanfed by the second Section) leaving it on for three or four dayes, without going abroad, or exposing the skin to the air: at the end of the time cleanse

cleanse the face by the second Section: so almost to a miracle, the skin of the face and neck is rendred most gratefully white, soft, delicate and amiable. This is the Spanish Fucus which several Ladies now use.

IX. To make an excellent red Fucus.

Make a decoction of red Sanders in double distilled vinegar, adding a little Alom, with a few grains of Musk, Amber-grife, or of some sweet Spices, and you will have a perfect red Fuens for the face.

X. Another very excellent.

Take juice of Clove-gilliflowers, with which mix a little juice of Limons: with this paint your face, and you shall have a pleasing red colour.

XI. To do the same another way.

Make a strong infusion of Clove-gillistowers in rectified spirit of wine, adding a few drops of oil of Vitriol, or instead thereof a little Alom, and the juice of a Citron or Limon; so shall you have an excellent colour to beautiste the face with.

XII. A Fucus or Paint not easie to be discovered,

Take feeds of Cardamoms or grains of Paradife, Cubebs, Cloves, and raspings of Brazil, which insuse in rectified spirit of wine for ten days, over a gentle heat; then separate the spirit: this is so perfect a Fucus, that it may deceive any man, for this clear water gives a fresh, red and lovely colour which will last long.

XIII. A Fucus or Cosmetick of river Crabs.

Take of the flesh which remains in the extremities of the great claws of river Crabs(being boiled) a sufficient quantity, which dry gently, and then extract a deep tincture with rectified spirit of wine; evaporate part of the menstraum, till the tincture have a good thickness or body; with which (the skin being cleansed) anoint the cheeks first, applying over it some other albifying Cosmetick.

XIV. Spa-

XIV. Spanish wooll, wherewith women paint their faces

Boil shearings of Scarlet in water of quick-lime half an hour, of which take two pound, to which put Brazil two ounces (rasped) Roch Alom, Verdegrise, of each one ounce, Gum-Arabick two drachms, boil all for half an hour, which keep for use.

XV. To do the same another way.

Take Spirit of wine one pound, Cochenele half an ounce, rasped Brazil one ounce, Gum-Amoniack three drachms, mix and digest till the Gum is dissolved, then boil it gently, and strain it for use, into which you may put old linnen rags, or Spanish wooll at pleasure.

#### CHAP. II.

Of Cosmeticks which beautifie without any thing of Paint.

L A N excellent Cosmetick or Liquor of Talk.

Take powder of Talk (made by rubbing it with pumice stones; or beating it in a very hot mortar; or filing it with a Goldsmiths smoothing file) eight ounces, Salis Tartari sixteen ounces, calcine it twelve hours in a wind furnace, and set it in a Cellar, separating that which melts, from that which doth not: then calcine this dry Calx added to four times its weight of Sal-nitre, with a strong fire, so the Talk will be melted into a clear white mass, which being set in a Cellar will turn to a clammy liquor.

This wonderfully whitens and beautifies the skin, and takes away spots and freckles from the face: but you must not leave the liquor long on, but wash it off with decoction

of wheat bran, that it corrode not the skin.

I!. To make the skin foft and smooth.

The Face being very clean, by the second Section of the first Chapter, wash it very well with a Lixivium of Salt of Tartar, and after that anoint it with Pomasum; or which is better, Oil of sweet Almonds, doing this every night going to Bed. The Pomasum we have taught the way to make in our Pharmacopaia, lib. 5. cap. 4. Sect. 22. 5.

III. A Water to cleanse the Face from Scurf and Mor-

phew.

Take distilled rain water fix Ounces, juice of Lamons twelve ounces, mix them, and wash with it morning and evening, anointing after it at night going to bed with the oil or *Pomatum* aforesaid.

IV. An Unquent which brings the skin to an exquisite

beauty.

Take of our *Pomatum* one ounce, Salt of Tartar one drachm, Musk twenty grains, mix them well, and (the face or skin being very clean) anoint morning and evening.

V. A wonderful Cosmetick of great worth.

Take white Tartar twenty ounces, Talk, Salt, of each ten ounces, calcine them in a potters Furnace very well; then grinding the matter upon a marble, put it into Hippocrates his sleeve, and set it in a Cellar or other moist place for twenty or thirty days, and there will drop from it a precious oil; which being rubbed upon the skin softly with a linnen cloth (the skin being duly cleansed first) takes away all kind of spots, and makes the skin soft and delicate.

VI. A cheap, yet excellent Cosmetick,

Take Alom in fine powder, and shake it with whites of new laid eggs, being a little heated, till such time as they grow thick to an ointment, with which anoint the face morning and evening three or four days; and it will take away foots and wrinkles, and make the

VII. An excellent Mercanial Cofmetick prevalent against

most deformities of the skin.

Take Mercury purified from all blackness half a pound, Mercury Sublimate in powder as much, mix them in a stone or marble Mortar; put them into an Alembick of a strait Orifice, put on distilled Vinegar, till all be covered three or four singers, letting it stand four days, daily stirring the same at certain times, then it extracts a whitish powder; the whitish. Vinegar by inclination separate, rejecting it, and put on other Vinegar: the powder at bottom keep so for some days: which labour you must so often retreate, till you have abundance of that white powder, which dry, and keep for use: anoint with it, by mixing with it a little distilled rain water, and it will take away all blemishes of the skin, as also Tetters. Use it not too often, and beware you touch neither eyes nor teeth with it.

VIII. Another of great estimation.

Take Mercury Sublimate, Saccharum Saturni, of each two drachms, Rose water, juice of Limons, of each two ounces, mix them like to an ontment, with which anome gently at night, and the next morning with the Pomatum aforesaid.

IX. To make a kind of Lac Virginis, an excellent Cof-

motick.

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Take diffilled rain water a quart, Saccharum Satarni cryffallized one ounce, mix them, and then wall with the water being fettled: the fine white powder at bottom, is afform excellent fucus or paint, which may be laid upon the skin if very clear: note, some use Vinegar instead of the rain water.

X. To make Oleum Tartari per deliquium.

Take Salt of Tartar, which put into a bag with a corner in a moist Cellar, and the oil will distil therefrom in drops: with this oil you may mix a little fair water, and wash your face at night going to bed; and the next morning, the face being very clean, you may wash with the aforesaid Lac Virginis; thus continuing for some days, you may create an exquisite and lasting Beauty.

XI. A compound Cosmetick esteemed by some of great

force.

Take of the aforefaid Lac Virginis one ounce, oil of Tartar aforefaid half an ounce, mix them, with which wash morning and night for about a week or more, as you shall see occasion, then anoint with the following ointment.

XII. To make the Cosmetick Ointment aforesaid.

Take musk three drachms ambergriefe two drachms, civet one drachm, grind them upon a porphyre or marble ftone, with oil of Ben and Rhodium of each three ounces, with which anoint as aforefaid: note, fome instead of the oil of Ben, use oil of sweet Almonds.

XIII. A vesegable Cosmetick.

Besmear your face or skin at night going to bed, with the juice of Wake Robin; it is excellent.

XIV. An incomparable Cosmetick of Pearl.

Dissolve Pearls in juice of Limons or distilled Vinegar, which digest in Horse-dung, till they send forth a clear oil, which will swim on the top: this is one of the most excellent Cosmeticks or Beautisiers in the world: this oil if well prepared is richly worth seven pound an ounce.

XV. A Cosmetick Ointment of great worth.

Take of our *Pomatum* aforefaid fix ounces, Saccharum Saturm two ounces, mix them, and anoint mornaing and evening.

XVI. Another very good for the skin.

Mix Saccharitm Saturns one drachm, in Vinegar half an ounce, which mingle with the glair of eggs, and anoint with it.

XVII. A Cosmetick wonderful to make a pleasing ruddy

Complexion.

Take oil of Tartar four ounces, Alom, Sal Gem, of each one ounce, Borax, Camphire of each half an ounce, beat them well together, to which add of Briony water a pint, dittil them in Babies, and you will have your defire.

XVIII. Another for the same.

Take Madder, Myrrh, Saffron, Frankincenfe, of each alike, bruife and steep all in White wine, with which anoint the face going to bed, and in the morning wash it off, and the skin will have a gallant pleasing blush.

XIX. To make the Cosmetick of Myrrh, very excellent.

Boil Eggs till they are hard, slit them and take out the yolks, fill them up with powdred myrrh, close them together, and lay them in a moult Cellar, and the myrrh will dissolve into oil.

XX. To make a very good Wash to whiten the skin, and

give a good complexion.

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Take Limons, hens eggs boiled, of each twelve. Turpentine eight ounces, distill all in Balneo Maria, with which wash: when you wash, you may drop into it a drop, two or three of oil of Oranges or Cinnamon, for fragrancy sake.

XXI. A Cosmetick to make a rough skin smooth.

Take fweet Almonds blanched four pound moisten them with spirit of wine and rose water mixt together.

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ther, of each two ounces, beat them together and fry them; and when they begin to smoak put them into a bag, and press them (in a press made for that purpose) and there will come forth a very clear oil; which put into rain water, and beat it till it is exceeding white to it was think alone

# CHAP. III.

Of Cosmeticks, which remedy the various Vices of the skin.

I. To take away Sun hurnings.

To glair of ten eggs put Sugar-candy one ounce, and anoing with it going to bed: or anoing with the juice of Sow-bread at night going to bed; and in the morning with oil amphacine. The like effects hath our Lag Virginis at the ninth Section of the second Chapter, as also Oleum Tartari, and other things of like nature

II. To take away redness and Pimples.

First prepare the skin by bathing it often with the decoction of wheat-bran, and applying pultifles of bread milk and oil thereto: when the skin is thus suppled and rarified, you may cure them either by our liquor of Talk, at the first Section of the second Chapter, or mercurial Competick at the leventh Se ction of the lecond Chapter, or our Lac Kirginia and oil of Tartar at the ninth and tenth Section of the second Chapter, of by often walking with juice of Limons

III. To

Chap. 3. Of remedying the vices of the skin. 405

III. To take away Freckles.

Take fuice of Limons, put it into a glass bottle, to which put fine Sugar, and Borax in powder, digest it eight days in Sand, then use it; or mix Sal Tartars with whites of eggs, and apply it; or often use our compound Cosmetick at the eleventh Section of the seven and thirtieth Chapter, or oil of Tartar alone, for some weeks, but if all fail, you must have recourse to our Liquor of Talk at the first Section of the second Chapter, or Mercurial Cosmetick at the seventh Section of the said second Chapter.

IV. To take away spots from the face or skin.

This is done by anointing with oyl of Tartar for ten days; and after all that to wash it with a Lixivium of Quick-lime in which Sal-armoniack hath been dissolved for a long time: or you may use the Cosmetick at the third Section of the second Chapter camphorated.

V. To cleanse a skurffy skin.

If the creature be fat, forment first with a Liebium of Salt of Tartar; but if lean, make a fomentation of Borrage, Bugloss and Mallow leaves, which use for some days: this being done, bath the place where the scurf is, with Spiritus Nicotiane made by sermentation, which being dryed in, anoint first with oil of Tartar, then with oil of Almonds; repeating the three last works so often till the scurf goes away.

If all these fall, you must have recourse to our liquor of Talk, or Mercurial Cosmetick; or those at the fifth and eighth Section of the second Chapter, which without doubt

will perform your defire.

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VI. To free the Skin from Tetters and Ring-worms.

Dissolve Sublimate one ounce in a glass of Red-wine by boiling, with which wash the place morning and evening, letting it dry of it felf, for three or four days

Dd 3

together,

together, and it will certainly cure: if they be not inveterate, our liquor of Talk at the first Section of the second Chapter, or Mercurial Cosmetick may sufficiently do; or you may anoint with this ointment. Take Sal Tartari two drachms, burnt Alom three drachms, powder and incorporate with whites of eggs: Or this, take Sulphur vive three drachms, Camphire one drachm, Hogs-grease two ounces, mix and make an ointment.

VII. To take away wrinkles from the Skin.

Take oil of Almonds, lees of oil Olive, and make them into an ointment with wax, powder of Camphire and Mastich, with which anoint, Oil of Myrrh to anoint with, is eminent in this case: or wash with a decoction of Briony roots and Figs of each alike: or dissolve Gum Tragacanth in Lac Virginis, and wash with that. Excellent good is a strong decoction of Pomegranate Pills in White-wine, to wash often with.

VIII. To take away Warts.

The juice of the greater Spurge with Salt, anointed takes them away, so also a continual washing with a Lixivium of Quicklinne and Salt of Tartar. The juice of Verricaria performs the same. A plaister of Cantharidas with a defensative is very good in this case: so also this following wash: take Saccharum Saturni three ounces, Sal-armoniach one ounce, Vitriol common six drachms, Quicklime eight ounces, boil all in water four pound to the consumption of the half, with which often bath the Warts, and then wash with our Mercurial water. Black Soap hath often been found very good; but especially a Plaister of Turpentine.

IX. Toheal Chaps in the Skin.

Our Pomatum in this case is most excellent: yet this following is commendable. Take Capons greafe mixed well

Chap. 2. Of remedying the vices of the skin. 407 well with Camphire, and anoint with Oil of Turpentine two drachms, mixed with Unguentum Populeon two ounces, is very good. So also oil of Roses mixed with Sheep Suet and wax to an ointment.

X. To heal Burnings and Scaldings.

Excellent good is the *Unquentum Rubrum* in our *Synopsis Medicina lib.* 3. cap. 58. Sett. 1. both to draw out the fire, and to heal. To draw out the fire also, glair of eggs mixed with Rose-water, is very prevalent: so also is Salt, raw Onions, Soap, Yest, Oil of Tartar and the like. To hinder the rising of the blisters, Hens dung three ounces, mixed with Hogs grease four ounces, and Salt of Tartar one ounce is very good; so also a cataplasm of Honey and crums of bread; but best of all a plaister of strained *Opium*, with Oil and Wax, which performs all the intentions to admiration. If the blister break, it may be presently skinned by anointing with oil of eggs, and wasting often with *Lac Virginis*, strewing upon the sore, powder of Bole, Tutty, Ceruse or the like.

XI. To take away scars and marks of the small Pox.

Take of oil of Tartar one ounce and half, Ceruse dissolved in oil of Roses one ounce, Borax and Sal Gem of each one drachm, mix and make an ointment, with which anoint. Oil of Tartar alone performs this work well: so Salt of Tartar, mixed with powder of Myrrh and oil of Roses. But Emplast. Epispasticum is infallible and safe.

XII. To beautifie the hands.

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To make them soft, often anoint with the oil of Almonds or our *Pomatum* at night going to bed, washing them the next morning with decoction of wheat-brans after a while wash them with Salt of Tartar, dissolved in fair water, perfumed with oil of Cloves, Oranges, Rhodium or Cinnamon. Or this, take Venice Soap D d 4.

diffolved in juice of Limons one pound, Virgin-honey four ounces, Sublimate, Orice root, Sugar, Salt of Tartar, Alom, Borax of each one ounce, Baltom of Peru two drachms, oil of Cloves one drachm, oil of Rhodium and Cinnamon of each half a drachm, make a mixture to wash the hands withal: Or this take powder of Venice Soap one pound, Orice root eight ounces, Amylum fix ounces, mix them and make an ointment with liquid Storan and oil of Benjamin a sufficient quantity; ir wonderfully whitens, smooths and softens the hands. To anc masso with a Bulls gall is very good.

XIII. To belp bands which are fively, and look ved or

blem with cold.

What we even now faid (in the last Section) may be said again here: to which we add, that a long bathing of them in a lather of Castle Soap, is very good if it be done: or if a repercussive plaister be applied made of barley meal, Saccharum Saurmi, and oil of Myrtles; washing (after the coming off of the Cataplasme) with junce of Linnons or white-wine Vinegar: a plaister of Turpentine mixed with Salt is good. Often to amoint the hands with oil of Roses, Almonds, or Panaum at night, and the next morning with the Lac Virginia prevails much. Oil of Annifeeds, Caraways and Franch prepared chymically, as also Cloves and Oranges maked with oil of Almonds and often used, are eminent above all other things.

XIV. To make the Skin lofter fromth, and white, take

away Pimples, Morphew, Seurf, 800. 01 model On

Bath the places affected, well, morning and night, with Powers of Rolemers, Amber, or Limon, and you will have your delire in some short time with advantage. These things are beyond all hitherto named.

#### CHAP. IV.

Of making a sweet Breath.

I. A Stinking Breath comes from one of these four canfes, viz. Putristed Lungs, desective Teeth, a distemper of the Head, or obstruction of the Stomach.

Take Ungnentum Nicotiane one ounce, Oleum Succimi two drachms, mix them and anoint the breast outwardly; inwardly give cleansers, (as oil of Sulphur allayed with Rose water, or rather digested with Spirit of Wine) morning and evening; as also Antimonium Diaphoreticum ten grains sive times a day for several days together; then heal by giving oil of Almonds mixed with a few drops of oil of Cinnamon, or Pills of Turpentine: Lastly, morning, noon and night let this bolus be adhibited, take Nutmegs, Mace, Ginger, of each fifteen grains, honey two drachms, oil of Cinnamon ten drops, mix them, and continue it for some weeks. Bezoar Minerale is samous. III. To belp the defetts of the Teeth.

r. If the Teeth be furred over, rub them every morning with cremor Tartari in powder, and wash them with White-wine. 2. If the teeth be black; allay oil of Sulphur or Vitriol in Rose-water, and scowr them well therewith, with the end of a stick and a rag, till all the blackness be gone; then rub them with oil of Almonds persum'd with oil of Cinnamon. 3. If the teeth be loofe, first rub them with this powder, take Galls, Pomegranate flowers, Sumach, Cyperus, of each one ounce, Roch Alom half a pound, powder them all for use; then use this Gargarisme. Take Galls one once,

Myrrh,

Myrrh, Pomegranate peels of each half an ounce boil them in White-wine Vinegar for a Gargarisme. Lastly. morning, noon and night wash the gums with good red Wine; by this means the teeth will be fastned and the gums restored. 4. If they be in danger of rotting ; take ashes of Harts-horn, magistery of Coral of each one ounce, musk, or instead thereof oil of Cinnamon. ten grains, mix for a dentifrice to rub the teeth withal. it will keep them white and found. 5. If they be rotten and hollow; make little pellets of strained Opium. Myrrh and oil of Cinnamon, and put them into the hollow tooth. 6. If they ach; use the aforesaid pellets. or make little ones of Landanum Paracelli, and put them into the hollowness: or if they be not hollow. tye a little pill of the same up in a fine thin rag, and hold it between the aking teeth. 7. If they flink; often wash them with wine or spirit of wine, in which a few drops of oil of Cinnamon and adeps Rofarum is diffolved. But for the pain, a Dose of Landanum at night. going to bed, is without exception.

IV. To reltifie a Stinking Breath arising from distemper

of the head.

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Confider the cause of the distemper, whether it arises from the Pox, Apostemes, or the like, and follow the method instituted in the cure of those diseases. and then the cause being taken away, the effects you will find will foon cease; yet nevertheless these following pills are excellent: take Calx of refined Silver made by spirit of Nitre, and well dulcified by washing in warm rain water, one ounce, Refina Scammonii one ounce and half, mix them for a mass of pills, of which take eight or ten grains at night going to bed every third, fourth or fifth day.

V. To rectifie a Spinking Breath arifing from the obstru-

Elion of the Stomach.

This is done by opening and cleanfing the Stomach thus. Take every evening going to bed half a drachm of Pil. Ruffi for ten or twelve days rogether: Or thus, first vomit with Vinam Benedistum one ounce or more, according as Strength requires, twice or thrice; then take Pilula Rudii half a drachm at a time, in the morning fasting, drinking after it some warm broth or posser-drink, which repeat every third or fourth day four or five times.

VI. To rectifie the Breath, when it Smells of any thing

that is eaten.

Chew Coriander feed, or Zedoary in the mouth, drinking a good draught of wine after; the fcent of the wine is taken away by eating fowr apples or Quinces, or by chewing troches of Gum-Tragacanth perfumed with oil of Cinnamon.

# CHAP. V. ni project la son

Of beautifying the Hair.

I. To dye the Hair black, ibeni bialerole och elo uov.

This is done with the Calle of Luna (made by Spirit of Nitre) mixed with fair water, and the hair washed therewith, with a Spunge: it is the most excellent thing of that kind that is yet known,

III To keep the hair from falling off. 20110.

Take Myrthe berries, Galls, Emblick Myrobalans of each alike, boil them in oil Omphacine, with which anoint: it is an excellent Medicine, yet as old as Galen.

III. To remedy Baldriefs.

This is a hard thing to cure, yet the following things are very good. Rub the head or bald places every morning

morning very hard with a coarse cloth, till it be red, anointing immediately after with Bears grease: when ten or fitteen days are past, rub every morning and evening with a bruised Onion, till the bald places be red, then anoint with honey well mixed with Mustrard-seed, applying over all a plaister of Labdaum mixed with mice duag, and powder of Bees: do this for thirty days: If all the former fail, bath with a decoction of Bur-dock roots, made with a Livivium (of Salt of Tartar) two parts, and muskadel one part; immediately applying this Unguent: take Thats or Turbeth onedrachmia powder) Bears grease one ounce, mix them, which ase for fixty days; if this make not the hair come, the defect is incurable.

IV. To take away hair from places where it should not

grow.

Take Quicklime four ounces, Auripigmentum one ounce and a half, Sulphur view, Nitre, of each half an ounce, Lixivium of Salt of Tartar a quart, mix and boil all so long in a glazed earthen pot, till putting a quill therein, all the feathers peel off, and it is done. First foment the place with warm water a little before you use the aforesaid medicines a quarter of an hour after wash with yery hot water, then anoint with the aforesaid Unguent, and in a quarter of an hour it will do the work; when the hairs are fain away, remember to anoint with oil of Roses; now to keep them from ever growing again, anoint for some days with an ointment made of the pieces of Hendane and Nightshade, Opium and Hogs greate.

Vi To make the bain curl some fi

Painton

Wash the hair very well with a Lixivium of Quicklime, then dry it very well, that done, anoins it with oil of Myrtles, or oil Omphasine, and powder it well with sweet powder, putting it up every hight under a

cap:

Chap. 6. Of the Art of Perfuming in general. 413 cap: if the party be naturally of a cold and moist confliction, the washing, anointing and powdring must be perpetually used once or twice a week during life, the hair being put up every night.

VI. To make beir lank and flag that curls too much.

Anoint the hair throughly twice or thrice a week with oil of Lillies Roses, or Marsh-mallows, combing it after it very well.

VII. To make the hair grow tong and foft.

Distil Hogs grease or oil Olive in an Alembick with the oil that comes there-from anoint the hair, and it will make it grow long and soft; use it often.

VIII. To preserve the hair from splitting at the ends.
Anoint the ends thereof, with oil Omphacine, or oil of Myrtles, they are eminent in this case to preserve the hair from splitting, so also an ointment made of Honey, Bees wax and oil Omphacine or Bears grease.

#### CHAP. VI.

Of the Art of Perfuming in General.

I. IN this Art two things are to be confidered. vie.

The way and manner of making of Perfumes.

. The way and manner of Perfuming.

II. The Perfume it felf is confidered, I. In respect of its form. 2. In respect of its Composition.

III. The Form of the Perfume is eather Water Oil,

Effence, Unguent, Powder, or Tablets.

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IV. The Making and Composition is taken from the Form and matter.

V. The

V. The Matter is either Vegetable, Animal or Mineral.

VI. The way of Perfuming is according to the

matter to be perfumed.

VII. The matter to be perfumed is either natural, as Hairs, Skins, Cloaths, Air, &c. or Artificial, as Pomanders, Powders, Wash-balls, Soaps, Candles, and other things of like nature.

#### CHAP. VII.

Of the Matter of which Perfumes are made.

I. THE ground of Vegetable Perfumes, is taken from Flowers, Seeds, Herbs, Roots, Woods, Barks, and Gums.

II. The chief Flowers for this use, are of Clovegilliflowers, Roses, fasemin, Lavander, Oranges and

Saffron.

III. The chief Seeds or fruits are Nutmegs, Cloves. Carraways, Grains, Seeds of Geranium Moschatum, and

the Nut Ben.

IV. The chief Herbs are Geranium Moschatum, Bafil, sweet Marjoram, Tyme, Angelica, Rosemary, Lavender, Hyssop, sweet Trefoyl, Mint and Bay-tree leaves.

V. The chief Roots are of Calamus Aromaticus, Ginger, China, Carpophyllata, Indian Spicknard and sweet

Orrice or Iris.

VI. The chief Woods are of yellow Sanders, Xilo-ballamum, Linum Aloes, and Rhodium.

VII. The Barks and Peels are of Cinnamon, Mace,

Oranges, Limons and Citrons.

VIII. The

VIII. The chief Gums are Frankincenie, Olibanum, Labdanum, Styrax, Iquid Styrax, Balfamum Verum, Ambergrife, Styrax Calamita, Benjamin, Amber, Camphire.

IX. The chief matters of Perfumes taken from Animals, are Musk, Zibet, Cow-dung, and other

turds.

X. Of Minerals there are two only, which yield a Perfume, and they are Antimony and Sulphur.

# CHAP. VIII.

Of the Oil of Ben.

I. THE little Nut which the Arabians call Ben, is the same which the Latins call Nux Unguentaria; and the Greeks Balanes Myrepsica; out of which is taken an Oil, of great use in the Art of Per-

fuming.

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II. To make the Oil of Ben. Blanch the Nuts, and beat them very carefully in a mortar, and sprinkle them with wine, put them into an earthen or Iron Pan, and heat them hot, then put them into a linnen cloth, and press them in an Almond press, this work repeat, till all the Oil is extracted, so have you Oil of Ben by expression.

III. In like manner you may express the Oil out of Citron feeds, incomparable for this purpose, to extract the scent out of Musk, Civer, Amber and the like, because it will not quickly grow rank, yet Oil of the Nat

Ben is much better.

IV. This oil of Ben hath two properties; the one is, that having no scent or odour of it felf, it alters, changes or diminishes not the scent of any Persume put into it:

the other is that it is of a long continuance, fo that it scarcely ever changeth, grows rank, corrupts or putrifies, as other oils do.

V. To make a Perfume thereof, put the Musk, Amber, etc. in fine powder thereinto, which keep in a glass bottle very close stopped, for a month or more,

then use it.

VI. Or thus, Blanch your Nuts, and bruife them, (Almonds may do though not so good) and lay them between two rows of Flowers, suppose Roses, as semin, or or other Perfumes; when the Flowers have lost their scent and sade, remove them, adding fresh ones; which repeat so long as Flowers are in season; then squeez out the oil, and it will be most odoriferous.

VII. Laftly, by this laft you may draw a fweet frem out of those Flowers, out of which you can more

distil any sweet water.

#### CHAP. IX.

Of freet Warens.

I. He first sweet water.

y Peiffune pur into it:

Take Cloves in powder two drachms, yellow Sanders, Calamus Aromaticus of each one feruple, Aqua Rafarum Dannicanarum fifteen pound, digeti four days, then diffill in an Alembick; to this new diffilled water put in powder Claves, Cianamon, Benjarin, Storax Calamine of each one drachin, diffill again in Balneo; laftly put the water into a glass bouche with Musk and Ambergrife of each tengrains, heep it close fropt for use

II. The second sweet Waters

Take Damask Roles exampulated three pound; Flowers of Lavender and Spike of each four ounces, Clove gilliflowers, and Flowers of Jasemin, of each two pound, Orange-flowers one pound; Citron peels four drachuns, Cloves two drachuns, Cinnamon, Storax Calamira, Benjamin, Nutrnegs, of each two scruples all in powders, Aqua Refarms fix pound, digest ten days, then distill in Balance to the distilled water add of Musk and Ambergrise of each thirty grains.

III. The third sweet Water.

Take Roses, Clove gillistowers of each one posted, Flowers of Rosemary, Lavender, Jasemin, Marjoram, Savory, Time, of each three ounces, dry Cittor peels one ounce, Cinnamon, Benjamin, Storax Takimira, of each two drachms, Nutmegs, Mace, of each one drachm, bruise the Herbs and Spices well, digest in the Sun two days, then distill in Balnes: to the distilled water add Musk in powder one scruple.

IV. The fourth sweet Water.

Take Cloves, Cinnamon of each one drachm, Mace, Grains, Musk, Ambergrife, Citron peels of each half a scruple, Benjamin, Storax Calamini of each one scruple, Aqua Rosarum twelve pound, digest fifteen days, then distill in Balnes.

V. The fifth (weet Water.

Take Rosemary-flower water, Orange flower water of each five pound, Ambergrise one scruple digest ten days, then distil in Balneo.

VI. The fixth freet Water.

Take Roses two pound, Macaleb half a drachm, Ambergrise ten grains, bruise what is to be bruised, digest in sand three days, then distil in Balnes.

VII. The feventh sweet Water.

Take green peels of Oranges and Citrons of each four drachms, Cloves half a drachm, flowers of Spike fix ounces, Aque Refaram Damascenarum six pound, digest ten days, then distil in Balme.

VIII. The eighth (weet Water.

Take of the water at the fifth Section fix pound, Musk ten grains, mix and digest them for use.

IX The ninth (west Water.

each four pound, Musk one scruple, digest ten days, then distil in sand.

X. The senth freet Water.

Take Damask-roles, Musk-roles, Orange-flowers of each four pound, Cloves two ounces; Nutmegs one ounce diffiling an Alembick, in the note of which hang Musk three scruples, Amber two scruples, Civet one scruple, tyed up in a rag dipt in bran, and the white of an egg mixed.

XI. The eleventh frest Water, called Aqua Nanfa or

Naphe.

Take dana Refaram four pound, Orange flower-water two pound, waters of fweet Trefoy), Lavender, Sweet Marjoram of each eight ounces, Benjamin two ounces, Storan one ounce, Labdanum half an ounce, Mace, Cloves, Cinnamon, Sanders, Lienum Aloes of each one ounce, Spicknard one ounce, all being grofly beaten, digeft a month, then in a glass retort diffil in Balue.

XII. The twelfth sweet Water, called Aqua Moschata. Take spirit of wine rectified to the highest two pound, Musk three scruples. Ambergrise two scruples, Civet one scruple, digest in the Sun twenty days close stoped in aglass welled, a drop of this water put into any other liquor, will very well persume it.

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So may you extract the foest ent of fivert Flowers, with this difference, shat they live but a little while, because their curry fulffance will make the Spirit of favoured

XIII. The shiredenth frates Water Take a quart of Orange flower mater, and as much Damask Rofe water; add thereto Musk willow feeds grolly bruiled four ounces. Benjamin two ounces. Styrax one ounce Labdanum for draditins, Lavender: flowers two pugils, musked Cranesbill three pugils; Sweet-Marjoram as much, Calamas Aromaticus a drachm, diffil all in a glass Hillatory in Balant, the joynts being well closed that no vapor get out thin tilies with a gentlefire, to have you Oil and Spi-

# Rolling willing in Knor Paketh Daffer vate in matule

Of Perfuming Oils and Spirise.

To make Perfuming Oils by infusion.
This is taught hilly an all of This is taught fully at the fifth Section of the eighth Chapter aforegoing.

II. To make Oleum Imperiale. Take Ambergrife four drachms, Storax Calambras eight ounces, Role-water, Oleum Rofatum of each two pound, oil of Cinnamon and Cloves of each half. a drachm, put all into a glass, and digest in horse dung twenty days: this done, gently boil all for a quarter of an hour, which then let cool; with a spoon take off the oil which swims a top, to which put of Musk and Zibet of each two drachms, digest all in a gentle hear for twenty days, and keep it for use. Where note the Amber and Storax at bottom will ferve to make fweet balls of, to lay among cloaths, or beads to carry in ones hands; or for a perfume to burn. III. To

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IH. To make Oil of Commamon.

Digest Cinnamon grosly bruised in spirit of Wine, sharpned with oil of Salt, in a glass vessel, with a blind head closely luted, in a gentle heat for ten days, then distributed head closely luted, in a gentle heat for ten days, then distributed head closely luted, in a gentle heat for ten days, then distributed head of the same and pleasant of all Oils, as well in taste as smell: the use of it will certainly take away a stinking Breath.

IV. To make Oil of Roses, called adeps Rosarum.

Take Damask Roles pickle them with Bay salt, and after three months, with a large quantity of water diffil in ashes with a gentle fire, so have you Oil, and Spirit or water, which keep for other distillations. Wicken

rus hath it thus,

Rosarum folia in umbra aliquandise asservata in matula vitrea magna povuntur, cujus st fundus latus, & ad dimidium vas impletur: inde assumbitur ipsis Rosarum soliis tantum aqua rosacea stillatitia, quantum satis suerit, m optime madeant: appositioque pileo vitreo caco, stipatisque optime rimis cera gummata, quindecim diebus equimo sima macerantur: sic tamen, utimutato, cum frigescere caeperit, simo, calor aqualis servetur. Apposito mox matula rostratopileo, igne moderato einerum, aqua omnis elicitur: que rursus in eadem matula, optime prius à secious mundata ablutaque ponitur, & calentis aqua balneo lentissimo igne elicitur, dum tota in vas recipiens abeat. Nam in sundo matula remanebit oleum rosarum, colore rubrum, perspicuum, & Moschi odore subviter fragrans.

This is the greatest of all vegetable perfumes, and

of an inestimable value.

V. To make Oil of Calamus Aromaticus.

It is made as oil of Cinnamon: it is a very great perfume, helps a stinking breath, vomiting, weak memory, &c.

VI. To

VI. To make Oil of Rhodium.

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It is made as oil of Cinnamon: is a very excellent perfume, good for the head, breath and the fenses.

VII. To make Oil of Indian Spickned.

By infusion it is made by the first Section; by distillation, as oil of Cinnamon. It is an eminent Persume.

VIII. To make Oil of Benjamin.

folve in oil of Tartat and whom Rolarum of each one pound, which distil with a close pipe in an Alembick. So is made oil of Storax and Landsman.

IX. To wake Oil of Storax compound.

Storate groffy beaten four ounces. Benjamin, Cloves, of each rivo ounces, digest still the Gums are melted over hot coals; then press out the oil diligently.

X. Townsky Spirit of Ambergrise.

Take of the best rectified Spirit of Wine a pint; Ambergrise, Musk (both in fine Powder) of each two drachins, seal up the Glass hermerically, and digest in a very gentle heat till the Tincture is fully drawn out; three or four drops of this Spirit will perfume a pint of any Liquor richly. Or you may put a drop or two round the brims of a drinking glass half a spoonful of it mixt with a fit Vehicle, is a rich Cordial.

Ec 3

CHAP,

VI. To make Oil & Khodium. pe fume, good for the head, breath I. Tomake OME I Sech H. O.

VIII. To make Oil of Bemarite.

1. The way to carracte Different is famouther difficult, pound, which diffil with a close pil or an . mitordone

II. If by Monthward wie noo a towary come food watry effence; nor an oily one for an oily effence; because being of like natures, they are not cashly separased i but on the conorary, chuse an oily denfron for a watry effence, and a watry adequation for an oily over hot coals; then mels out the oil diligent bonells

III. If the effence of any metal be to be entracted by 3 satrofres Menfreum, aftertheworkisdone, feparate the falts from the waters and after only the folials which will be easily taken dun again. Vimiland with care ve my difficult to be separated by reason of their earthy Substance vn out : three or four drops of

W. Ta extract the effence out of Music vanturguise Citets and when Spites att Atomaticumor owing gorb.

Mix the perfume with oil of Ben, which in a glass bottle fet in the Sun or Sand for ten days then strain it from the dregs, and the effence will be imbibed in the oil. Then take spirit of Wine, and distilled fountain water, which mix with the faid oil, and digest for fix days: then distil in fand; so will the effence and water afcend, (the oil remaining at bottom without any scent) that essence and water distil in Balneo in a glass vessel, till the water be come off, and leave the effence in the bottom in the form of oil.

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V. Another way to do the same.

Infuse the matter in spirit of Wine a sufficient quantity, digest and ferment for ten days, then distil in sand, as long as any water will come over but have a care of burning) which distilled Liquor draw off in Balnes, with a very gentle heat and the quintessence will be left in the bottom, of a liquid form.

VI. To extract the effence out of Herbe and Flowers, as of Sweet Marjoram, Basil, Orange-flowers, Jasemin, &c.

Bruise the matter, and put it into a glass veiler to ferment in Horle-dung for a month, then distill in Ballier set it in dung for a week again, and distill in Ballier set it in dung for a week again, and distill in Ballier again; which reiterate so long as it will yield any liquots, put the distilled matter upon the Capit hor tunm, distilling thus for six days, draw off the water in Balneo; and the essence remaining express in a press; which being a week sermented in dung, will yield the persect focus; colour and vertues of the matter desired.

VII To extract the effence out of Salts.

Calcine the Salt, and grind it very finall, then lay it upon a marisle in a moift Cellar, ferting under it a part to receive the diffolution; therein let it ferment for a month, then with a gentle fire diffil in Balnes; call away the infipid water, which comes from it; and let that which remains in the bottom, to ferment another month, then diffil out the infipid water as before; repeating this work to long as any infipid water may be drawn; then evaporate away all the moifture, and what remains is the quinteflence of Salt.

Where note, 1. That these Suline quintessences as they may be used, will draw forth the perfect and compleat essence of any vegetable whatsoever. 2. That the essence of Salts thus drawn, will scarcely come to two ownces in a pound.

Be 4

CHAP.

# tity, digest and serment for ten day allow dishil in fand, as song as any na ... IIX; . A. A. H. Dong as any na ... IIX;

V. Another way to do the fame.

of Perfuning Unquents, were great of the

L. To make Unguentum Pomatim, or Ointment of

Take Hogs Lard three pound, Sheeps Suet nine ounces, bruiled Cloves one drachin, Aqua Rofarum two ounces. Poinwaters pared and flieed one pound, boil all to the Confumption of the Rofe-water; then ftrain without prefling, to every pound of which add oil of Rhodium and Cinnamion of each thirty drops.

II. To make a compound Pomarum of soil bit good a

Take of the Pomatum aforefaid (without the oils) four pound, Spicknard, Cloves of each two ounces, Cinnamon, Storax, Benjamin of each one ounce (the Spices and Gums bruifed and tyed up in a thin rag) Rofe-water eight ounces, boil to the Confumption of the Rofe-water, then add white wax eight ounces, which mix well by melting, strain it again being hot; and when it is almost cold, mix therewith oil of Musk (made by the first Section of the tenth Chapter) then put it out, and keep it for use.

III. Another excellent Ointment.

Take hogs greate one pound, Saccharum Saturni two ounces, mix them well by gently melting them to which add oils of Musk and Ambergrife of each half an ounce, let them all cool, and beat the Unguent well in a mortar, and keep it for use.

IV. To make Unquentum Moschatum.

Take hogs greafe one pound, Ambergrife, Mosch of each one drachm and a half, (ground with oil of Jafemin

Chap 13. Of Perfuming Powders.

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femin upon a trained to the control of the control

VI. Pender of fines Orrice, the full we.

Take Florent HEOrri AoHi Dowder one pound,
Benjamin Cloves of each four ounces in powder, mix

mix il an and put them into bags for nie.

I. To make Punder of Ox dung.

What Take red Ox dung in the month of Min and dry it well, make it into an impalpable Powder by grinding: it is an excellent Porfame without any other addition; yet if you add to one point of the former, Musik, and Ambergrife of each one thathin, it will be beyond companion; yet or aged other man in a great and the point companion; yet or aged other man in a great and the point companion; yet or aged other man in a great and the point companion.

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Gather Musk moss of the Oak in December, James or February, wash'nt very clean in Rose-water; then dry it, steep it in Rose-water for two days, then dry it again; which do oftentimes then bring it into fine Powder and sterce it; of which take one pointd, Musk one ounce, Ambergrise half an ounce, Cive two drachins, yellow Sanders in powder two ounces, mix all well together in a marble mortar.

111. Another way to make the fame office

Take of the aforelaid powder of Oak moss one pound, Benjamin, Storax of each two ounces in fine Rowder; Musk, Ambergrise and Civet of each three drachms, mix them well in a mortar.

IV. A Sweet Powder to lay among Cloaths.

Take Damask-rose leaves dryed one pound, Musk half a drachm, Violet leaves three ounces, mix them and put them in a bag.

V. Another

V. Another for the fame or to mean about one.

Take Role leaves dryed one pound Cloves in powder half an ounce, Spicknard awo drachms, Storas, Cinnamon of each three drachms, Musk half a drachm, mix them and put them into bags for use.

VI. Powder of sweet Orrice, the first way.

Take Florentitie Orrice root in Dowder one pound, Benjamin, Cloves of each four ounces in powder, mix Of Perfaming Powders. them.

VII. Powder of Florentine Orrice, the Second Way.

Take of Orrice real has a control of James and John O'T. der faur ounces Marjorame Gloves Storax in powdet of each one ounce. Bendaning yellow benders of each Caperus half a deacher min them being grown power dered, put them into bags to lay among thinneh bud being fine, they will ferve for other mes as we shall Carber Musk mois of the Galc in December, I wash

in theep in it to de-water for two days in the in the most part in the cape in it is a cape in twelve ounces dewers of Rolemany and Roman Camornildaves of Time Geranian Adofebanan Savory of ench four ounces, Cyperus roots, Benjamin, yellow Sanders, Lignum Rhedium, Citron peck, Sporge, Labdinam, Cloves, Cinnamon of each one ounce, Musk two drachms. Civer one drachmand a half. Ambergrife one drachm, powder and mix them for bags. This composition will retain its through near twenty vears.

IX. Powder of Orrice, the fourth may

Take Orrice roots in powder one pound, Galamus Aromaticus, Cloves, dryed, Role leaves, Coriander feed, Geranium Moschatum of each three ounces, Lignum Aloes,

ray one ounce and a half, Lakely one punce faring property of a half, Lakely one ounce and a half, Lakely one ounce and a half, Lakely one powder all layers of each four ounces, powder all and mix them, to which add what, Lakely of the Damask Rofes, yellow Sangle of Take Damask Rofes, yellow Sangle of the property of the

Take Submey Animatical composition and these to Take Submey Animatically yellom Sanders of eath one ounce, Marjoran, Geranium Mass haum of eath one ounce, Most leaves, Violets, of seath excidentians, Natures, Cloves the each one drached. Music halfer dualities, make all into powders which put in bags for

grains, they the Clafs closs and fer it in the countil the leaves be thorough dry, some and fer it in the countil the leaves be thorough a some and the countil th

hair. Some one close to growed yourselo? 2000 XII. An excellent perfuming Powder for the Hair. Sold Take Iris roots in fine powder opeourse and a half, Benjamin, Stocker, Clowes Much of each two drachins; being all in fine powder, min them for a Perfume for bain Bowder. Take of this Perfume one deschin, Rice flower impalpable one pound mix them for a powder for the bair. Notes forms the white flarch, flower of French Beans and the like.

XIII. A fweet Powder for a Sile Rage

Take Benjamin, Hunax Colomica; Cloves, Lignum Allary of each two ounces, yellow Sanders three onnees, Florencine Ornice fix ounces. Musk half a drachm mingle them.

XIV. Another for the fame.

Take Florentine Orrice; Spicknard, fuseet Matjoram dayed, Germium Majchaum of each four ounces,
Damask

Damask Rofes, Cypress, Lavender flowers, of each shuce ounces, Benjamin, Lignum Rhodium, of each an ounce mix them? 100 100 10 bishing a consequent

and mix them, to notwern the law of work TVX of

Take Damask Rofes, yellow Sanders, Lignum Aloos, of each four ounces, Benjamin, Spicknard, Cypres, of each two ounces, mingle them together.

and XVI) Another for the fame particle of the server a handfull cut off the whites, put them in a Glass, and put to them Musk half a fourtle, Anthergrise fix agrains, Civer four grains, stop the Glass close, and set it in the South the leaves be thorough dry.

Take Orriog Oppress, white Sanders, Lavender, Damask Roles, of each four ounces; Calimbia, Secretary, Geravian Majobatumy of each two ounces; Cloves, Rolemary flowers, of each one ounce, man them.

AlexVIIIs administration of the Bagg and mission and a halfy Marjoram, Orrice, of each four ounces of Granian Marjoram, Orrice, of each four ounces of Granian Marchains three ounces Labdanian two ounces and altalif,
Lignum Aloritudine Sanders, Cloves Cypres, Bonjamin, Calamai, of each two ounces, Musk, Ambergrife, of each one drachm, mingle them.

XIX. White Dumask Powder show Asset

Take Orrice in powder, white flarch, of each eight ounces; fine Musk a fcruple, mix it first with a little, then with more, and lastly with the whole by degrees, the longer it is kept the better.

XX. Another Damask Powder.

Take damask Roses in powder two ounces and a half; Calamus, Orrice, Cypress, Geranium Moscha-

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tum, Lavender flowers, sweet Marjoram, Labdahlm, of each two ounces; Benjamin, Storax Calamita, of each an ounce and half; Nigella Romana one ounce; Musk, Ambergrise; of each a drachm, mingle them.

XXI. Another Damask Powder.

Take Orrice four ounces; Cloves two ounces; Labdanum, Cyprefs, Benjamin, of each one ounce; Calamus, Storax Calamina, of each half an ounce; Civet, Musk, of each ten grains, mix them.

XXII. Another Sweet Powder.

Take Orrice six ounces; Cloves sour ounces; yellow Sanders, Storax Calamita, ana, two ounces, Lab-danum one ounce, Musk a scruple, make a Powder.

## CHAP. XIV.

Of Perfuming Balfams.

I. Natural Balfams perfumed.

Take Balfamum verum one ounce, Musk, Ambergrife, Civer of each two scruples, mix them, for a Perfume: it is the most fragrant and durable of

all Perfumes.

II. An odoriferous compound Balfam.

Take of the aforefaid Ballam perfumed one ounce, oils of Rhodium and Cinnamon of each two drachus, mix them: this is an incomparable Perfume, and better than the other for such as are not affected so much with Musk.

III. Balfamum Mofchatum. ....

Take oil of Musk one drachm, oil of Cinnamon half a scruple, Virgin wax one drachm and a half, melt the wax, and mix them according to Art.

IV. Another tow. Lavender flowers, Livecthon governdton VI.

Take Cloves, Canamon, Lavender, Nutmegs of each two drachms oils of Cloves and Roding of each half a drachms Waxabree drachms Wusk and Ambergrife of each ten grains, mix them into a Ballam.

V. Another very excellent for those that love not the foent

of Musk and the like.

Take oil of Geranium Massharum (made as adops. Rosarum by the fourth Section of the tenth Chapter) adops Rosarum, oil of Cinnamon of each one drachin, Virgin wax six drachins, melt the wax, and this the oils for a Persume.

# CHAP. XV.

# Of Perfuming Tablets.

I. To make red Muskardines or Tablets.

Diffolve Gum Tragacanth in Rose-water, so that it may be as thick as Gelly: which make into passe with the following composition. Take Amplian one pound, fine Sugar half a pound, Cochemia two ounces, Musk three drachms, all being in fine powder, mix them, and make Tablets with the aforesaid Mucilage of Tragacanth, square, long, round, or of what form you please, which dry in an Oven, out of which bread hath been lately drawn: but be sure you dry them till they be as hard as horns.

II. Another fort of red Tablets.

Take of the aforelaid composition one pound, Cloves, Cinnamon, Nutmegs, Ginger of each two ounces, Cochenelo one ounce, all being in fine powder, make into Tablets, with the aforelaid Mucilage, and dry as aforelaid.

III.To

III. To make yellow Tablets,
Take Amylum one pound, fine Sugar half a pound, vellow Sanders four ounces, Saffron two ounces, (or you may dip the Amylum in strong tincture of Saffron. and then dry it again) Musk four drachins, all being in fine powder, make the mass into Tablets, with the aforefaid Mucilage, adding oil of Cinnamon in drops two drachms, dry them carefully in the shade.

IV. Another fort of jellow Tablets.

Take Amylum dyed with tincture of Saffron one pound, Sugar half a pound, Saffron two ounces, Nucmegs Cinnamon, Ginger of each one ounce, Carroways half an ounce, Musk three drachms, Ambergrife one drachm, all in fine powder make into Tablets, as aforesaid, adding oil of Cinnamon two drachens: which dry in the shade, till they be as hard as Horn.

V. To make Muscardines or Tablets of any other colour. You must make them after the fame manner only adding the colour you do intend; and in this case we think that it is better that the Anylum be dipt in the tincture, and dryed first before you use it. Where note. that these Tablets, when used, are to be held in the mouth, in which they will dissolve, thereby cheering the heart, reviving the fenses, comforting the spirits, strengthning nature, restoring the body, and indeed nobly perfuming the breath. For them that do not love Musk, you may make them without using instead thereof, so much the more oil of Roses or Cinnamon.

. who with fore. Take Spicknerd on ounce, freed Generalize Association, of other half an

#### Take Amilam one pound, fine Sugar half a pound. vellow Sanders AVX ne. 4. A. A. A. A. Woo cances.

III. To make rellow Tablets.

# Of making Pomanders for Bracelets.

He first fort. Take Orrice powder, Cloves, Mace. Cinnamon of each half an ounce yellow Sanders. Styrax, (weet Alla of each two drachms, Ambergrife, Musk of each one drachm, Balfam of Penn, oil of Rhodium of each one scruple. Civet two drachms. all being in fine powder (except the Balfam and oil) mix together, and make into paste with Mucilage aforefaid, of which form Beads, drying them in the fhade for use.

II. The fecond fort. Take Storax, Labdanum, of each one drachm and a half, Benjamin one drachm, Cloves, Mace, Spicknard, Geranium Moschatum of each ten grains, Musk, Ambergrise of each fix grains; with Mu-

cilage make a Pomander for Bracelets.

III. The third fort. Take Damask-Role leaves exungulated two ounces, beat them impalpable: Musk. Ambergrife of each two scruples. Civet one scruple. Labdanum one drachm with Mucilage of gum Tragacanth, in Rose-water aforesaid, make a Pomander for Bracelets.

IV. The fourth fort. Take Storax, Benjamin of each an ounce and half, Musk two drachms, oil of Cinnamon one drachm, with Mucilage aforefaid make

a paste of Pomander, very excellent.
V. The fifth fort. Take Spicknard an ounce, sweet Marjoram, Geranium Moschatum, of each half an ounce, Orrice, Cloves, of each two drachms, Calamus, Lignum Rhodium, Lignum Aloes, of each a drachm, Cyperus, Benjamin, Cinnamon, white Sanders, of each each a scruple, Labdamm, Styrax Calamita, and Liquida, of each half a scruple, with Mucilage of Gum Tragacanth in Rose-water, make a paste for Pomanders.

VI. The fixth fort. Take Storax Calamita two ounces, Bafil three ounces, Cloves an ounce and half, Benjamin, Marjoram, Storax Liquid, of each one ounce, Calamus, Cyptels, Labdanum, of each half an ounce, Musk a scruple, Ambergrise twelve grains, Civet six grains, with Mucilage of Gum Tragacamb in Rose-water make Pomanders.

VII. The feventh fort. Take Labdanum an ounce, Storax, Cloves, Mace, Cinnamon, of each three drachms, Ambergrife, Musk, of each a drachm and a half, Virgin Wax an ounce, mixt with fweet or Chymical oyl of Bays half an ounce, dissolve, mix

and work them well together.

VIII. The eighth way. Take Labdanum fix ounces, Wax two ounces, Camphir, Calamus, Myrrh, yellow Sanders, wood of Aloes, Olibanum, Mastich, of each two drachms, Cinnamon, Cloves, Zedoary, Storax, Calamint, of each a drachm and half, Musk, Ambergrise, of each a scruple, put them into a Mortar, and with a little Malmiey, make a mass for Pomanders.

IX. The ninth fort. Make Gum Tragacanth half a pound into a Mucilage with Damask Rose water Muskifield, to which add Storax Calamita nine ounces, Nutmegs four ounces, Labdanum three ounces, Cinnamon, Cloves, Camphir, liquid Storax, natural Balsam, of each one ounce: put the Labdanum into the Mortar, with a little Oil of Spike, and then the other things, which beat into a paste, with powder of black sallow Charcoal.

X. The tenth fort, Take Brong Mucliage of Gum Tragacanth in Rofe-water, which make into paste with Musk and Ambergrife in fine powder, of each a like quantity, then anointing your palm and fingers with oil of Musk, or fome other fweet Oil, as of Lavender or the like, form them into round little Balls or Beads, which put upon a string, and dry them between two papers, being dryed, keep them close from the Air, till you have occasion to use them.

### CHAP. XVII.

Of Perfuming Wall-balls.

TO make Barbers Wash-balls. Take purified Venetian Soap fix ounces. Macaleb four ounces, Ireos, Amylum of each feven ounces, Cloves two ounces, Labdanum, Annifeeds, of each one ounce, Nutmegs, Marjoram, Cypress powder, Gerani. um Moschatum, Camphire, of each halfan ounce Storax liquida half a drachm, Musk ten grains, all being in fine powder, with a little fine Sugar, beat all in a Mortar, and make them up into Wash-balls.

II. To do the same another way.

Take of the faid Soap two pound, juice of Macaleb two ounces, Cloves, Orrice, of each three ounces, Labdanum two ounces, Storax one ounce, all being in fine powder, mix with the Soap, of which make balls, drying them in the shadow.

III. To make Balls of white Soap.

Take of white Soap five pound, Iris four ounces, Amylum, white Sanders, of each three ounces, Storax one

one ounce, all in powder, steep in Musk-water, of which make paste for Wash-balls.

IV. Another fort very good.

Take of white Soap four pound, Ofrice fix ounces, Macaleb three ounces, Cloves two ounces, all in powder mix with the Soap, with a little oil of Spike, Rhedium or the like, of which make Balls.

V. Another way to make them of Goat's Fat.

Make a ftrong Lixibium of Pot-affies, as that a new laid Fig will Iwim thereupon, which boil with Citron peels: take of this Lye twenty pound, Goars Fartwo pound, boil it for an hour, then strain it through a linnen cloth into broad platters of fair water, exposing it to the Sun, mix it often every day till it begins to grow hard, of which you may form Balls, which you may perfume with Musk half a drachim, Civet one scruple, oil of Cinnamon ten grains.

VI. To make common Wash balls, the best of that

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Take Venice or Castile Soap sliced very thin, four pounds, Spirit of Wine half a pint, beat all together; then add Chythical oil of Sassaffas or Limons an ounce or more; and beat again very well: Lastly, add white Starch made into a paste with water by boiling a sufficient quantity to make all into an even and smooth Mass, which form into Balls of four ounces a piece, with powder of white Starch, dry them and keep them for use.

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CHAP.

## CHAP. XVIII.

Of perfuming Soaps.

To purifie Venetian Soap.

Cut it finall, to which put fome Rose-water, or other perfuming water, boil them a while, then strain it and it will be sweet and good, then take off the Soap which swims a top with a spoon, and lay it upon a Tyle, and it will presently be dry, being white, free from filth and unctuosity.

II. Another way to do the same.

Grate the Soap, and dry it in the Sun, or an Oven, powder and fierce it, then moisten it with some sweet water or oil f Spike, which dry again (in the shadow) and keep it for use.

III. To make white musked Soap.

Take white Soap purified as aforefaid three pound, Milk of *Macaleb* one ounce, Musk, Civet of each ten grains, mix them and make all into thick cakes or rouls.

IV. Another kind of sweet Soap.

Take of the oldest Venice Soap, which scrape and dry three days in the Sun (purifying it as aforesaid) two pound, Ireos, Amylum, of each fix ounces, Storax liquida two ounces, mix them well whilst hot; which put into pahs to form Cakes.

V. To make foft Soap of Naples.

Take of Lixivium of Pot-ashes (so strong as to bear an Egg) sixteen pound, Deers Suet two pound, set them upon the fire to simper, put all into a glazed Vessel with a large bottom, set it in the Sun for a while, stirring it

five or fix times a day with a stick, till it wax hard like paste. Then take of this paste, to which put musked Rose-water, keep it eight days in the Sun, stirring it as aforesaid, so long as it may be neither too hard nor too soft; then put it up in boxes or pots.

VI. To make the same Soap musked.

Put to the faid Soap, Rose-water two pound, fine musk in powder half a drachm, then mix the said water as before.

VII. Another exquisite Soap.

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ith git ive Take of the aforesaid Lixivium or oil of Tartar per deliquium twelve pound, oil Olive three pound, mix them, Amylum two pound, Roman Vitriol one ounce in powder, Glair of Eggs two ounces, put all together, and stir continually for four hours time, then let it stand the space of a day and it is done. You may perfume it as before; this makes the hair fair.

VIII. Another exceeding the former.

Take Crown foap, Vine alhes, of each one pound, make it into Cakes with powder of Roch Alom and Tartar of each alike, which you may perfume at pleasure.

IX. To get the juice or milk of Macaleb.

Take the fweet and odoriferous grains of *Macabb*, which beat in a mortar (with Rose-water, or some perfuming water) till it becomes like pap, then press out the juice or milk; which use within two or three days lest it spoil.

#### CHAP. XIX.

Of burning and boiling Perfumes.

. To make perfumed lights,

Take Olibanum two ounces, Camphire one ounce, beat them into powder, of which make, with wax,balls or rowls, which put into a glass Lamp with Rose-water and lighted with a candle, will give a fair light, and a very good scent.

II. Another for a Lamp.

Take fiveet oil Olive one pound, Benjamin, Storax in powder one ounce, Musk, Ambergrife, of each one scruple, mix all with the oil, which put into a Lamp to burn: and the oil will yield a fragrant odour.

III. To make perfumed Candles.

Take Labdanum, Myrrh, Xylo-aloes, Styrax calamita, of each one ounce and a half, Willow Charcoal one ounce, Ambergrife, Musk, of each ten grains, make them into paste with Mucilage of Gum Tragacanth in Rose-water, which make into rouls like Candles, and dry for use.

IV. A Perfume to smoak and burn.

Take Labdanum two ounces, Storax one ounce, Benjamin, Cloves, Mace, of each half an ounce, Musk, Civet of each ten grains, all in fine powder, make up into cakes with Mucilage of Gum Tragacanth in Rofewater, which dry, and keep among your cloaths, which when occasion requires, you may burn in a chafing-dish of coals.

V. Another Smoaking Perfume to burn.

Take Labdanum two drachms, Storax one drachm, Benjamin, Frankincense, white Amber, Xylo-aloes, of each Chap. 19. Of burning and boiling Perfumes. 439 each two scruples, Ambergrise, Musk of each five grains, make all into Cakes as aforesaid.

VI. Another very excellent.

Take Storax, Benjamin of each one ounce, wood of Aloes half an ounce, Ambergrife, Musk, Civet, Balfam of Pern, Oil of Rhodium, of each two scruples, Ivory burnt black a sufficient quantity, powder what is to be powdered, and mix all together; which make into a paste, with the Ivory black and the Mucilage aforesaid; make little Cakes and dry them, which keep in glasses close stopt for use.

VII. Another very good, but of less cost.

Take Olibanum one pound, Styrax Calamira and Liquida of each eight ounces, Labdanum fix ounces, Willow charcoal a sufficient quantity, with Mucilage of Tragacanth, make a paste as aforesaid.

VIII. A Sweet perfume to burn.

Take Storax Calamita, Benjamin, of each an ounce: Labdanum 6 drams: Musk 5 grains; put them into a mortar, heat fo hot, that by beating with a little Pettle, they may work together like Wax, which make into little Cakes or Balls, and keep them for use.

IX. A burning perfume for a Chamber.

Take Benjamin, Mastich, of each an ounce, Storax Calamita, Gum Anime, Amber, of each half an ounce: Time, Sweet Marjoram, Lignum Aloes, yellow Sanders of each 2 drams: all being in powder, with Gum Tragacanth dissolved in Rose-water make a Mass for Cakes or Balls.

X. Another for the same.

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Dissolve Gum Tragacanth in Damask Rosewater, and make it into a paste with Labdanum, Styrax Calamita, Benjamin, Amber of each 2 drachms: Lignum Aloes, Lignum Rhodium, of each two F f 4 ounces: cunces : all being in powder, mix, and make Cakes.

XI. Another for the like intention.

Take Benjamin, Styrax Calamita, Amber, all inpowder, of each half an ounce; Lignum Aloes, yellow Sanders, of each fix drams in powder: make them into patte with Gum Tragacanth diffolved in Rose water, which form into Cakes, and dry them for use.

XII. A Perfume called Amber Pafte.

Take Styrax Calamita two ounces: Florentine Orrice, Amber and an ounce and half: Nutmegs an ounce: Musk a scruple: being in powder make a paste with Gum Tragacanth diffolved in Rose-water.

XIII Aboiling perfume.

Fill a Silver or Earthen pan with Damask Rosewater, adding Cloves well bruised half an ounce, Bay-leaves two drams: put them over the fire, and as it wastes, fill up with fresh Rose-water.

XIV. King Henry his perfume.

Take Damask Rose-water a pint; Cloves bruised, yellow of Limons of each half an ounce: Musk tengrains: boyl all in a perfuming pan, with two drachms of white Sugar.

XV. King Edward his perfume.

Take Damask Rose-water a pint: Ambergrise a Scruple, Civet ten grains: mix in a perfuming pan, setting it over soft Embers.

. XVI. The French Queens perfume.

First burn Chips of Cypress in the Chamber a pretty while, the doors and windows being shut. Then take Damask Rose-water a pint: white Sugar Candy an ounce: put them into a perfuming pan, and let them boyl softly on Embers.

CHAP.

# CHAP. XX.

Of Animal and Mineral Perfumes.

I. The Animal Perfume of Paracellus.

Take Cow-dung in the month of May or June, and distil it in Balneo; and the water thereof will be an excellent perfume, and have the scent of Amber-grise.

II. Lardmuskefied a great perfume.

Take Hogs lard very pure one drachm, Musk, Civet, of each half a drachm, mix them well for boxes.

III. The Mineral Perfume of Antimony.

Diffolve Antimony in oil of Flints, Crystal, or Sand, coagulate the solution into a red mass, put thereon Spirit of Urine, and digest till the Spirit is tinged; pour it off, and put on more, till all the Tincture is extracted; put all the Tinctures together, and evaporate the Spirit of Urine in Balneo; and there will remain a blood-red liquor at bottom; upon which put Spirit of Wine, and you shall extract a very pure Tincture smelling like Garlick: digest it a month, and it will smell like Balm; digest it a while longer, and it will smell like Musk or Ambergrise.

Besides being a persume, it is an excellent sudorifick, and cures the Plague, Fevers, Lues Venerea, &c.

IV. After the same manner you may make as substantial a persume of Sulphur or Brimstone. The making of the oil of Flints, we have taught at the seven and sistieth Section of the nine and twentieth Chapter of the third Book.

# CHAP. XXI,

Of the Adulteration of Musk, Civet and Ambergrise.

BY reason that these choice Persumes are often adulterated or counterfeited, we shall do our endeavour to discover the cheat, lest any being deceived thereby should

Suffer lofs.

I. Musk is often adulterated by mixing Nutmegs, Mace, Cinnamon, Cloves, Spicknard of each alike in a fine or impalpable powder with warm blood of Pidgeons, and then dryed in the Sun, then beaten again, and moistened with Musk-water, drying and repeating the same work eight or ten times; adding at last a quarter part of pure Musk by moistining and mixing with Musk-water; then dividing the mass into several parts, and rouling them in the hair of a Goat, which grows under his tail

H. Others adulterate it thus: By filling the Musk-cods with Goats blood, and a little toasted bread, mixed with a quarter part of Musk, well beaten together. The cheat is discerned by the brightness of the Goats

blood.

HI. Or thus, Take Storax, Labdanum, powder of Xylo-aloes, of each four ounces, Musk and Civet of each half an ounce, mix all together with Rose-water. The cheat is discerned, by its easie dissolving in water and its different colour and scent.

IV. Or thus, Take Goats blood, powder of Angelica roots, Musk, of each alike, make a mixture.

V. To adulter at e Civet: Mix with it the Gall of an Ox, and Storax liquefied and washed: or you may adulter at e it by the addition of Honey of Crete.

VI. 70

VI. To refere the lost from to Musk, or Ambergrist.

This is done, by hanging it formerime in a Jakes or house of Office: for by these ill scenes its innate wertue and odour is excited and revived.

## CHAP. XXII.

Of the may of Perfuming Cloth, Skins, Gloves and the like.

I. Perfume Skins on Glaves.

Put a little Civer thereon here and there (if Gloves, along the fearns) then wash in Rose or musked water four or five times, or fo long as that they favour no more of the leather, preffing them hard every time; then lay them in a platter, covered with the faid water, mixed with powder of Cypress, a day or two; take them out, press them and dry them in the shadow : being half dry, befinear them a little with Civet mix'd with oyl of Jasemin or Ben, on the inward fide chafing them with your hands before a fire, till you think that the Civet hath pierced or gone through the leather ; leaving them fo a day or more; then rub with a Cloth that the Gloves or Leather may grow fofc; leaving them so till they are almost dry, being drawn and stretched out; then hold them over some burning Perfume to dry, and wetting them again with Musk-water, do thus twenty times; lastly, take Musk and Ambergrise a sufficient quantity, which mix with ont of Jasemin, Benjamin or Ben, dissolve at the fire with a little perfumed water, with which ( with a pencil ) frike the Gloves or Leather over on the outfide; befinearing the fearns with Civer; lastly lay them for fix or eight days be-**Eween** 

tween two mattreffes, fo will the Skins or Gloves be excellently perfumed.

IL Another way very excellent.

Take three pints of Wine. Sheeps fuet or fat one pound, boil them together in a veffel close covered. this done, wash the Grease six or seven times well with fair water, then boil it again in White-wine and Rose-water of each one pound and a half, with a finall fire, till the half be confumed: then take the faid greafe, to which put pulp of sweet Navews roasted half a pound, boil all in Rose-water half an hour, then strain it, and beat it in a mortar, with a little oil of Jasemin and Musk, with which besmear your Gloves (after due washing as aforesaid) rubbing it well in by the fire.

III. Another may for Gloves:

Wash new Corduban Gloves, wash them well three or four days (once a day) in good muskified Whitewine, preffing and for oothing them well; laftly, wash. them in musked water, letting them lye therein for a day, then dry them with care. This done, freep Musk, Amber, Bazit of each one drachm in a quart of sweet water, in which dissolve Gum Tragacanth three drachms, boil all gently together, and in the boiling add Zibet one scruple, with which besmear the Gloves, rubbing and chafing it in, then drying them according to Art.

IV. Or thus, First wash the Gloves or Skins in white-Wine, then dry them in the shade; then wash them in sweet water, mixed with oil of Cloves, and Labdanum, of each alike: lastly, take Musk, Civet, Ambergrise of each the quantity of fix grains, oil of Musk half a drachm, mucilage of Gum Tragacanth fifteen grains, mix them well together in a mortar, which chafe into the wash'd Gloves

before the fire. V. Or

V. Or thus. Take Damask Rose-water muskified. a. s. put it into a pewter or Earthen diffi, and lay the Gloves in it one night and day, with a little turning now and then, and that they may be throughly wet; then take them out; and dry them carefully. Take Cloves an ounce and half, in fine powder; mix it with the same water, and lay it upon the Gloves, wetting them throughly, and dry them as before: Take ovl of Ben or of Almonds an ounce; Musk half a drachm: Ambetgrise a scruple, grind all well together upon a stone, with a few drops of the former water, with which anoint the feams, and chafe it into the Leather; laying many pairs one upon another, for some time, till they are throughly foaked, and then keep them carefully from the Air.

VI. Or thus. Take oyl of sweet Almonds, or of Ben, which is better, 2 ounces: Musk 2 drachms: Ambergrise half a drachm: Oyl of Cloves Chimicall a drachm and half: Grind all well together upon a Porphyry (the Musk and Amber being first in fine powder;) then digest two months, and keep it for use: Take Damask Rose-water Muskissed, and wet your Gloves therewith very well upon a board, then dry them; do this three or four times, and at last anoint them with the former Oyl; Keeping them as the former, with this oyl, you may anoint your hands, it will not only persume them, but also make them soft and smooth.

VII. Or thus. Take oyl of Cloves two ounces: Styrax Calamita, one ounce: Benjamin half an ounce Cinnamon three drachms: Musk half a drachm: Ambergrife a scruple: sweet marjoram, Time, of each 15 grains, mix and grind them on a Porphyry, to be used as the former Oyl, after

after washing of the Gloves in Damask Rose-water. VIII. Or thus. Take Musk two drachms: Ambergrise one drachm: Civet twelve, grains; mix them together well: then add Gum Tragacanth dissolved in Damask Rose-water Muskified: grind all upon a stone till they are very sine and fully mixed; then lay it upon your Gloves with a brush, being first washt in this following water. Take he of mood-ashes u pint and half: the pellow of a dozen Oranges: Brass and pellow Sanders in powder, of each an owne; Alum a small quantity: boyl to the Consumption of a third part, strain, and with a clean cloth or brush wash over your Gloves (being first washt in rain water from their Alum and Eggs) to colour them, four times; then being dry, apply to them the former Oyl.

IX. Or this. Take Musk a drachm: Ambergrife half a drachm, Civet 6 grains, grind them on a frone with Oyl of Limons, or with equal parts of Oyl of Limons, Saffafras and Rhodium; with which your Gloves (being washt as in the former section) are to be perfumed by anointing them with a small brush.

X. Cloths, Linnen or Woollen, Coffers, Tranks and the like, are best perfumed (with little cost) with the smoak of burning Perfumes, after which you may sprinkle them often with Damask Rose water Muskified, and anoint the Corners and closures of the boards with some of the sormer Oyls.

## CHAP. XXIII.

# Of making various forts of Ink.

I. To make good black writing Ink.

Take ponderous galls three ounces in powder, White-wine, or in place thereof rain-water, which is better, three pound, infufe them in the Sun or in a gentle heat two tlays: then take Roman Vitriol well coloured and powdered, which put therein, and fet all in the Sun for two days thore; shake all together, to which add of good Gum Atabick in little bits two drachins with a little white Sugar, which dissolve over a gentle fire. But some put in Gum Atabick an ounce.

II. To make red writing Ink.

Take Rathings of Brazil one ounce, white lead, Alom, of each two drachms, grind and mingle them, infufe them in Urine one pound, with gum Arabick two scruples, or a drachm at most.

III. Another way to make red Ink.

Take Wine-vinegar two pound, Raipings of Brazil two ounces, Alom half an ounce, infuse all ten days; then gently boil, to which add gum Arabick five thachms, distolve the Gum, strain, and keep it for use. Note, 2 drachms of the Gum in some cases may be enough.

IV. To make green Ink to write with.

Make fine Verdigrife into paste with strong Vinegar, and infusion of green galls, in which a little Gum Arabick hath been dissolved, let it dry, and when you would write with it, temper it with infusion of green Galls aforesaid.

V. Another way to make green Ink to write with.

Diffolve Verdigrife in Vinegar, then strain it, and grind

grind it with a little Honey and mucilage of Gum Tragacanth, upon a porphyry stone.

VI. To make blew Ink to write with.

Grind Indico with Honey mixed with glair of Eggs or glew-water, made of Ifing-glass dissolved in water, and strained.

VII, To make red writing Ink of Vermilion.

Grind Vermilion well upon a porphyry stone, with common water; dry it and put it into a glass vessel, to which put Urine, shake all together, let it settle, then pour off the Urine; and putting on more Urine, repeat this work eight or ten times, so will the Vermilion be well cleansed; to which put glair of Eggs to swim on it above a fingers breadth, stir them together, and setling abstract the glair; then put on more glair of Eggs, repeating the same work eight or ten times also, to take away the scent of the Urine: lastly, mix it with fresh glair, and keep it in a glass-vessel close stop'd for use. When you use it, mix it with water or vinegar.

VIII. To make Printers black.

This is made by mingling Lamp-black with liquid Varnish, and boiling it a little, which you may make thick at pleasure. You must make it moister in Winter, than in Summer; and note that the thicker Ink makes the fairer letter.

If it be too thick, you must put in more Linseed oil, or oil of Walnuts, so may you make it thicker or

thinner at pleasure.

IX. To make red Printing Ink.

Grind Vermilion very well with the aforefaid liquid Varnish or Linseed oil.

X. To make green Printing Ink,

Grind Spanish green with the said Varnish or Linseed oil as aforesaid: And after the same manner, may Chap. 24. Of making Sealing Wax, &c. 449 you make Printers blew, by grinding Azure with the faid Linfeed oil.

### CHAP. XXIV.

Of making Sealing Wax, and Glews.

I. TO make red foft Wax.

Take white Bees-wax one pound, Turpentine three ounces, Vermilion in powder well ground, oil Olive, of each one ounce, melt the wax and Turpentine; let it cool a little, then add the rest, beating them well together.

II. To do the same otherwise.

This is done by taking away the Vermilion, and adding instead thereof red Lead three ounces, to the former things.

III. To make green Wax.

Take Wax one pound, Turpentine three ounces, Verdigrife ground, Oil olive of each one ounce, compleat the work by the first Section.

IV. To make black Wax.

Take Bees-Wax one pound, Turpentine three ounces, black earth, Oil Olive of each one ounce, mix and make Wax as aforefaid.

V. To make Wax perfumed.

This is done by mixing with the Oil Olive aforefaid, Musk, Ambergrife, or any other eminent Perfume, as oil of Cinamon, adeps Rofarum, or the like one drachm, more or less, according as you intend to have its scent extended.

VI. After the same manner you may make soft wax of all colours, having what scent you please; by mixing the scent intended, with the Oil Olive, G g and

and putting the colour in, in place of the Vermilion.

VII. To make hard Sealing-Wax.

Take pure fine Gum-lack, melt it in an Earthen vessel, and put into it a sufficient quantity of the Colour you defign your wax to be of, stir and mingle it well, then take it off the fire, and when it is of a fit heat, you may make it up into Rouls or sticks. To make Red wax, you must colour it with Vermilion. Blew wax with Blew bice, Smalt, or Ultramarine. Green wax, with Green Bice, Verdigrife, or some other mixture of that Colour. Black wax, with Ivory or Cherry stone black. Purple wax, or of a dark Red, with prepared Caput Mortuum, Indian Lake, &c.

VIII. To make Mouth Glew.

Dissolve Ising-glass in fair water in a Gentle Balneo, then strain it through a wide hair sieve, whilft it is hot, upon another Course and close hair fieve: when it is cold it will be thick like Gelly: cut it into long handsom pieces, which put on a string, fo that they touch not one another, and hang them in the Sun till they are dry. You may give it a fine tast and smell, by mixing sweet and odoriferous things with it.

IX. Another kind of strong Glew for Pipes and Aqueducts: Tobaco pipe clay, dryed and reduced to powder, and mixt with good store of short flocks, and beat up with Linfeed Oyl toa stiff Paste, like kneaded Dough, makes a strong and lasting Cement for Pipes, and Aqueducts: And being made into Pipes (though

long a drying) is very stanch and lasting.

X. To make a very frong Glew.

Soak the finest Ichthyocolla (that is King-glass) 24 hours; in Spirit of Wine, or common Brandy: then boyl all very gently together, continually stirring of it, that it burn not, so long till it becomes one liquor or body (save some strings not very dissolvable) which strain whilst hot, through a course linnen cloth, into a vessel where it may be kept close stopt: a gentle heat will melt this Glew into a transparent liquor, with which you may glew things so strongly together, that they will rather break in any other part, than in the place glewed: it much exceeds the common Glew.

## CHAP. XXV.

Of the various ways of making Artificial Pearls.

I. The first way. Dissolve mother of Pearl in spirit of Vinegar, then precipitate it with oil of Sulphur per Campanam (not with Olemn Tartari, for that takes away the splendor) which adds a lusture to it; dry the precipitate, and mix it with whites of Eggs of which mass you may make Pearls of what largeness you please, which before they be dry, bore through with a silver Wire, so will you have pearls scarcely to be discerned from those which are truly natural.

II. The fecond way. Take Chalk, put it into the fire; letting it lye till it breaks; grind it impalpable, and mix it with whites of eggs, of which form pearls; boring them as aforefaid; dry them, then wet and

cover them with leaf filver.

III. The third way. Take prepared Crabs-eyes ground into impalpable powder, and with glair make Pearls; which bore, as aforefaid; dry them, and boil them in Cows milk; then in the shade (free from dust.) dry them well; they will please.

IV. The fourth way. Take Potters earth, and make

them of what form you please; dry them in the Sun, or in the gentle heat of a surnace; then wet them with glair of eggs, lightly coloured with Bole-Armoniack, and cover them with leaves of silver, being first wet with water: when they are dry, polish them with a tooth, and they will be Oriental. Then take bits of Parchment, and wash them in warm water, till the water grows somewhat thick, boil and strain it, and use it warm: then sasten each pearl through its hole upon a fine piece of wire, and plunge them into the water of Parchment, taking them out again; then turn them round, that the glewy liquor may equally cover them; thus the silver whiteness will the better shine through, so that the pearls will seem to be truly natural, and being compared, will rather exceed.

V. The fifth way. Calcine Muscle and snail shells in a Crucible, till they are very white, even as snow; with glair make Pearls, which bore by the first Section, dry them in the Sun; dip them in red wine,

dry them again, and they will be fair.

VI. The fixth way. Take Sublimate two ounces, Tinglass one ounce, mix them, and sublime them together, and you will have a sublimate not inferiour to the best orient Pearls in the world, of which with

Glair you may form what you pleafe.

VII. The feventh may. Take any of the aforesaid particulars, and mix them (instead of Glair) with ground Varnish, (made of gum Anima, and the Alcool of wine) of which make pearls; these will in all respects be like the natural; for these will no more dissolve in water, than the truly natural; which all those that are made of Glair of Eggs are unavoidably subject to.

VIII. The eight way. After diffolution, precipitation, edulcoration, ficcation and formation, pur the

pearls

pearls into a loaf of bread, and bake it in the Oven with other bread. To long till the loaf is much burnt. then take them out, and wash them, first in good juice of Limons, then in clear Spring-water; and they will be as fair as the truly natural. Or after baking, give them to Pidgeons to eat, keeping them close up, and in the dung you will find the pearl exceeding fair: where note, you must give the Pidgeons nothing to eat in three days time.

IX. The ninth way. After diffolution of small oriental pearls in juice of Limons, make the form thereof with clarified honey, moistning your hand with Aqua

Mellis; this done, perfect them as before.

X. The tenth way. Take filtrated juice of Limons, powder of pearl, of each fix ounces, Telk one ounce, put them into a glass, and frop it close, set it fifteen days in horse-dung, and it will be a white passe; of which form pearls, bore them, and dry them in the Sun;at last in paste of barley meal (viz. a barley loaf) four fingers thick, flick the pearl, so that they may not touch, stop the holes, and cover them with paste; set it, into an Oven &bake it with bread, &you will find them hard&clear.

XI. The eleventh way. Having formed them of the matter intended, bored and dryed them, put them into Quickfilver, fet over a glowing heat, styring them well about, that the Quickfilver may flick to them: then dip them into glair of Eggs, upon a glowing hear, and they are done; or being dry, boil them in Linfeed

oil, and wash them in warm water.

XII. The twelfth way. Take pearl three ounces, preparedSalt one ounce, filtrated juice of Limons, so much as will cover them four fingers breadth : let it stand fo long till it be a paste; the glass being very close stopded, shake all together five or fix times a day; and when it comes to paste, put it into a glass with strong Gg3 fpir.c

fpirit of Vinegar, late another glass over it; digest it three weeks in a cool place under the earth, so long till all be dissolved, then mix it with a little oil of eggs, or snail-water, till it be like pearl in colour; then put this paste into silver molds and close them up for eight days; after which take them out, and bore them by the stra Section, and put them again into the mould for eight days; this done both them in a silver porringer with milk; lastly, dry them upon a plate; in a warm place, where neither wind nor dust may, come, and they will be much fairer than any oriental pearl.

XIII. The thirteenth way. After the preparation of the matter in juice of Limons, or Agua fores, with clean hands make them into paste, and wash them in distilled water, which put into edulcorate calx of filver, and digest in Horse-dung for a month, so will

they be fair and very oriental.

XIV. The fourteenth way. Dissolve the matter in Aqua fortis (which let over-top it a singers breadth) in a glass gound, till all be incorporated into one body, which put into silver moulds, which have holes through them, and having stood one day, bore them through the holes, as they lye in the mould with a silver needle: being quite dry, take them out, put them into a glass close covered in the Sun, till they be quite dry; then put them upon a silver wire; and let them lye covered in their own fat, (that is, that fatty substance, which swims on the top of the menstruum in their dissolution) so long till they are very fair, then being strung, put them into a glassegg, and let them stand nime days in digestion, and they will be as fair as the natural.

XV. The fifteenth way. Take Tobaccopipe clay, of which form little beads (by Soft. 14.) dry them in the Sun, and burn them in a Potters furnace, then

cover

will

cover them with Bole-Armoniack, tempered with whites of Eggs; being dry, dip them in water, lay on leaf filver, which dry again, and polifh them with a tooth: then take clean fhavings of parchment, cut fmall and washed well with warm water; boil them in a new pot, with a slow fire till they become somewhat thick, strain it, and being warm, put in the pearl upon a needle or fine wire, that the hole may not be stopped, take them out, turn them round, that the water or glew may not settle in one place, dipping them so often (drying them every time) till they be thick enough, and they will appear full as fair as the truly natural.

XVI. The fixteenth way. Take the impalpable and fnow-white calx of Talk, and with our best Varnish make a paste; of which form pearls, and bore them with a silver wire, on which let them dry: this done, make a mixture of the Alchool of the incomparably pure red diaphoretick, Mercury, calx of talk aforesaid, shell gold and silver (in Lib. II. Chap. 21. Sect. 1.) in a just and due proportion (as by many tryals you may find out) in which roul your pearls till they be all over perfectly covered, then varnish them with our aforesaid varnish, which let dry according to Art, and if need be, polish with the impalpable powder of Putty and water.

XVII. The seventeemth way. Take Mercury and the finest Pewter, of each one pound; make an Amalgama, which wash so well, till the blackness is gone, make it into little Cakes, and lay them on a Marble Stone: then take Mercury sublimate two pounds in very fine powder, and strew it upon the Cakes; put them on a Glass dish, and set them in a very moist Cellar to dissolve into an Oyl, which rectifie by a Glass Helm in Balneo Maria, and so there

Gg4

will be drawn off by a gentle fire a Mercurial water. Then Take of the best small oriental pearls, one ounce; put them into the Mercurial water, and in two or three days they will be reduced to a paste, which in a filver Mould, you may form into Pearls of what bigness you please. At the same time you must hole them with a Silver Wire. Then put them when they are moulded into a new Crucible, but so that they touch not one another; the top of the Crucible being well covered and luted close; so set them in a Glass-makers annealing furnace, till they be very hard which will be in a little time. Afterwards make a Pye of flower, let it be very thick, and take the hardned Pearls, putting them on a Silver wire, and fo fix them in the Pye, that they touch not any part of it, nor one another. Lastly put the Pye, made close up, into an Oven of bakers houshold Bread, and let the Pye stand all the time that the Bread is baking; after which you will find the Pearls to be as well coloured as the best Oriental.

#### CHAP. XXVI.

Abrief discourse of Alchymy, and first of Metals in

I. THe Mineral Kingdom is divided into Metals,
Semi-metals, Salts and Stones.

II. Metals are in number seven, viz. Saturn, Jupiter, Mars, Sol, Venus Mercury and Luna, called by the Vulgar, Lead, Tin, Iron, Gold, Copper, Quickfilver and Silver.

III. The Semi-metals are Anthrony, Tin-glass Cin-

naber and Zink

IV. The

IV. The Salts are chiefly Vitriol, Sulphur, Arfenick, Alum, Nitre, Borax and Salt.

V. The chief stones are Lapis Calaminaris, Turia,

Lazuli, and Lime stone.

VI. Now out of these the Alchmist designs one of three things, to wit, 1. Either the Counterfeiting of the fine Metals. 2. Or the separation of fine Metals out of the base: or, 3. The Generation of the fine Metals out of the base, by transmutation.

VII. The counterfeiting of the fine Metals, is done by giving the colour, and body, of a fine Metal to that which is base; as the tinging of Lead into a Gold Colour; the whiting of Copper; the reduction of

Mercury or Quickfilver.

VIII. The Separation of fine Metals out of base, is done by attracting of the particles or atoms of the fine (contained in that baser) into one heap or mass, that they might not be carried away by the wings of the

Volatile or baser Metal.

Thus it appears, there is a large quantity of Gold, in Lead, Tin, Copper and Silver: and much Silver in Tin, Copper, and Iron: the proof of this is manifest by the parting Say ( as they call it ) to wit the test by strong waters; by which you may find that one pound of Lead will yield near three or four penny weight of silver, and one of Gold: One pound of Tin will yield something above an ounce of Silver; and about two penny weight of Gold or more; One pound of Silver will yield about one ounce of Gold; and Copper about a quarter of the same quantity or more, &c. but this is according to the goodness of the Metals, and the skill of the undertaker; for by this way of Separation, what is gotten will never pay the cost, it remains therefore, that we fearch out some way more profitable, the which in the following lines, to the true fons of Art, we shall faithfully present according to the best of

ope hypowledge: But we are bound to be a little the more obscure, for the sakes of some ingrateful men by whom we know our just meaning will be traduced; our skill in Art abused; and our person sought to be rom and destroyed, should we but adventure to be so open, as to give them the clear knowledge thereof. Let others search as we have done, it is some satisfaction, that the matter here sought, is really in return nature; the which joined to the certainty of anothers attaining thereof, may give life to suture hopes, which is the presenter of better things may point at the great mark it self.

IX. The matter of transmutation is done by that great ponder, sincture, Elixir, or stone of the Philosophers, which according to the opinion of Paracellus, and others the most learned, we shall signific in few.

words.

By this tintture or Elixir according to the judgement of Philosophers the whole body of any Metal (being separated from its impurity) is changed into fine Gold.

## CHAP. XXVII.

Of Saturn, or Lead.

I. S Aturn is a cold, gross, dull and heavy body, replete with much impurity, yet full of a golden

feed.

II. It is tinged into a pure golden colour by calcination thereof with Antimony, and imbibing the calx thereof with the spirit of Venus, lapis calaminaris, tutia, and Zink, severally prepared, and mixt and, and then reduced, adjoyning to every ounce of Leadin calx a penny weight of the golden sulphur of Venus.

III. Its

III. Its Lima property is extracted, by a fimple calcination with Arfenick and Niter, dna, and imbibition of the faid calx for about feven days in the Oil of Salt.

IV. Or thus, Take of our Seed or Salt of Luna one ounce, of the Salt of Venus one ounce and a half; of the crude body of Saturn one ounce, mix, and melt them; then separate, and you shall have the Saturnian

Land with confiderable advantage.

V. Take Lead beaten into thin Plates; and let them be put into a Glass Veffel, together with common Salt and Mercury: Let it be well closed together, and digested in the Earth or Horse-dung, for ten whole Months; and it will be converted into Quickfilver.

VI. Take Lead purified a pound, Sal armoniach two ounces in powder, Sal Niver in powder one ounce, Sal Elebror bruifed, half an ounce: Put all into a Crucible on a violent hot Fire, for two whole hours, then take it out, and it will be prepared for the Sil-

ver work.

VII. Or ibus, Get an earthen Pot, whose bottom is full of holes, put it into another Pot, and let it be covered in a small Pit; dig up the Earth thereon on every side, and tread it down with your Foot: Fill the upper void place with unslaked Lime, to the middle; then take Lead cut into thin little bits, and lay it upon the Lime; and over the Lead more Quicklime; put upon it boyl'd Urine, cover the Pot and little it well; make a great Fire on every side, heaping it up even over the top, and continue it so for a day; so shall a purified Lead fall through the Lime and Holes into the lower Vessel, which will be preparted for transmutation.

VIII. Or Lead may be thus purified. Melt your

Lead often, and cast it into the sharpest Vinegar: Melt it again, and cast it into juyce of Cellandine: then into salt-Water: then into Vinegar, in which Sal Armoniack has been dissolved: And lastly, let it be poured out into the Cipel, and so it will be

very well purified.

IX. Take Spring-water, Vitriol, of each a pound; mix them together: filter through brown Paper, and diffil the Water off in a Glass Alembick, which keep in a Glass for use. Take Quicksilver an ounce: put it into a Crucible over the Fire; and when it begins to be hot, ladd purified Leaf gold an ounce: and so temove it from the Fire; then take of your purified Lead, one pound, amalgamate it with the aforesaid mixture of Quicksilver and Gold, over a gentle Fire, stirring it with an Iron Rod: being well mixed, put thereto an ounce of the former Vitriol Water, stir, digest a Month, evaporate, and you have a Medicine in order to transmutation.

X. The preparation of Saturn. Set ti in a Furnace of Calcination, stirring it while in flux, as you do fur piter, till it be converted into Ashes; sift this, and fet it again in a Fire of Calcination, till its fugitive and inflammable substance is gone: then take this red Calx, imbibe and grind often with common Salt cleanfed, Vitriol purified and fharp Vinegar; this matter often imbibe, dry and grind, till all its uncleanness be wholly removed: this done, add Glass ground to powder, mix them well together, and make them flow in a Crucible. Calcine it again with pure Sal Armoniack, and most subtly grind and diffolve it into a clear Water upon a Porphyry Stone in the open Air, in a cold and moist place; augmenting the Salt if need be. This is the Preparation of the Ferment of Lead for the Red Elixir, CHAP.

## CHAP. XXVII.

Of Jupiter or Tin.

I. Jupiter is much a more noble body than Saturn, and (as we faid before) abounds much more with a Solar and Lunar feed.

II. It is reduced into the *Imitation* of filver by often melting of it, and quenching of it in the spirit of *Arsenick*; or by calcination of it with *Lime* (three ounces to a pound of *Impiter* granulated) and then by often extinguishing of the same in the spirit of

Arsenick aforesaid.

III. The Luna is extracted out of it thus: Let 74piter be married to our Luna of the fame stature by the Priest Mercury, after which let them drink their fill of the Mineral Spirit of the Grape; then put them to bed in the exaltation of Luna and house of Venus, and the next morning let them drink very well of the fruitful Wine of the daughter of Luna; this being done, you will find Luna like a bride coming forth out of the marriage chamber; but with the wings of an Eagle, which wings you must clip by the means of Mars, else you will lose her: Thus. take of the Seed of Mars, and the eldest Son of old Saturn ana, make them contend with Tellus, for three whole days and nights, till they conjoyn and beget a Son, white as Luna, and fixt as Sol. Son will by force take fupiters wife from him, and being fruitful cause her to bring forth a plentiful and profitable Issue.

IV. Or thus, Kill Jupiter (in conjunction with Luna) by the fire of Tellus, then revive the dead body (after

( after it is impregnated with the Mineral spirit of the Grape) by the help of Saturn, and you have a nume-

rous off-fpring of Luna.

V. Or thus; Marry Jupiter to Luna; then marry him to her daughter, and join these issues together, and they will sympathetically attract and join all the seed

of Lana into one family or lump.

VI. Or thus. Which is both the best and easiest way. Take Supiter and melt him, then quench him ten times in the spirit of Tellus, till he is reduced very fmall and low: this done, join him with the Daughter of Luna calcined with Tellus, and the work is over, This is very profitable, and the most useful of all, but by realon of the unmorthiness of this generation, it cannot admit of any explication.

VII. The Gold is thus extracted: marry Pupiter to Venus, and their off-spring to Sal by the means of Priest Mercury; put them to bed (in the life of Phabus ) for three whole days and nights, afterwards make them drunk with the spirit of the daughter of Venus, then make a perfect conjunction with the eldest Son of

Saturn, and you shall have what you sought.

VIII. On thus, Calcine Supiter granulated one pound, with Quick-line four ounces, mix all with the Calx of Venus and Lung and; calcine again for threedays, imbibe in the spirit of Venus (that is, the fixed oil) for feven days, then reduce to a regular with Saura, and

afterwards separate with Aminony.

IX. The preparation of Jupiter, Melt Jupiter, and continually thir it with an Iron rake, till it is brought to Ashes. These Ashes fift, calcine them again, adding fire not exceeding the Fire of its fution, and ftir it often, calcining it for 24 hours, till all its superfluors bumidity be wasted: then well wash it with purified common Salt and Alum; and most sharp Vinegar, Vinegar, and dry it; grind again, and wash and dry, doing thus fo often, till by the acuity of the Salts. Alum, and Vinegar, its whole humidity blackness, and filth is done away and confumed. Add to it Glass in powder, mix, and with a sufficient fire make it flow in a Crucible, having a hole in its bottom, fet within another, and the pure clean body will descend; the whole Earthly feculent substance remaining above with the Salts and Glass: for in that body reduced and descended is an equal and perfect proportion of pure Argent Vive, and white Sulphur not burning; because fire and the Corrosives, have divided the whole humidity, and fugitive Inflammable corrupt and black substance: and through that descensory the whole seculent substance is compleatly feparated. Afterwards calcine this pure reduced body again, with pure and clean Sal-Armoniack, until it be in weight nearly equal: being well and perfectly calcined, grind the whole well upon a Porphyry Stone, and put it in the open Air in a cold and humid place, or in a Glass Vessel in Horse-dung until the whole be diffolved, augmenting the Salt, if need be. This water is the ferment of Jupiter, for the White Elixir.

## CHAP. XXVIII.

Of Mars, or Iron.

I. Mars is yet a more noble body, but harder and more replete with scoria or filth, yet very full of a Solar and Lunar fulphur.

11. It is converted into Copper by the Oil or Spirit of Venus: into brass by the means of Lapis Calaminaris,

and made to imitate Silver by impregnating its cals in

the burning fpirit of Arfenick.

III. It has much Silver and Gold in it. but they are extracted with great difficulty; thus, first melt the body with an equal quantity of Tin, Lead and Copper; this done, granulate it and imbibe the body with Oil of Venus very strong, then calcine it with the butter of Arsenick (if you extract its Silver,) or Antimony (if it's Gold) imbibe this calx over a gentle heat in the strongest oil of Flints or Sand for ten days: then reduce it.

IV. Mars is whitened by the rules which we have delivered in Lib. 3. cap. 29. Sect. 31. 75, 76 77. and made of a Golden Colour by Sect. 28. of the same

Chapter.

V. The preparation of Mars. Let it be calcined as Venus with common Salt cleansed, and let it be washed with pure Vinegar; being washed, dry it in the Sun, and when dryed, Grind and Imbibe it with new Salt and Vinegar, and then put it into the same Furnace, as we shall hereafter say of Venus, for three days: this calcination dissolve into a clear water, which is the water of the fixed sulphur, wonderfully augmenting the Colour of the Elixir.

VI. Another preparation of Mars. Grind one pound of the filings thereof, with half a pound of Arfenick sublimed. Imbibe the mixture with the water of Salt-peter and Sal-Alcali, reiterating this Imbibition thrice: then make it flow with a violent Fire, and you will have your Iron White; Repeat this work till it flow sufficiently, with peculiar dealba-

tion.

VII. Take of the Calx of Mars made into a Passe with Mercury 2 pounds: of Venus 4 pounds: of Saturn 4 pounds: mix these without serment, and boyl Boyl the mixture for feven days, and you will find the whole dry. Fix it and put it (rogether with half its weight of Litharge beaten into powder) into a reducing furnace, and you will find a body of great profit.

# CHAP XXX

of Sol, or Gold.

1. Sol is the pureft of all Metals, and the very per-

all our pains, labours and endeavours aim.

II. This Gold of it felf is dead and without force or power, but being quickned, and enlivened, it has an inward fembrating or germinating property, which being raised and brought forth by its innate life (till now lockt up) can dilate it felf (having a fitting momb to receive it) into an hundred times its own quantity; and thereby transmute or change the Mercurial property (which is indeed immature Gold) of all Metals into its own nature and kind.

III. This immaturate Gold in the bodies of all Metals would have come to perfection of its own accord, had it been ennobled with a fufficient life and heat, to have caused such a natural fermentation and excretion of the abounding filth and dross, in which the so small particles and Atoms of the Seminal golden property

was latent, or buried.

IV. The quickning of the inward life of this Metal is folely done by the help of the Seed of Metals, to wit, Mertary, but how or after what manner we shall more plainly shew in Chap. 32.

V. Solis thus prepared. Take Sol beaten into thin Plates.

Plates or rather Leaf Gold, and with them and Common Salt prepared, make Lay upon Lay in a Veffel of Calcination, which fer into a furnace and calcine well for three days parill the whole be fubtilly calcined; then take it out, grind it well, wash it with Vinegar, and dry it in the Sun, afterwards grind it well with half its weight of Sal-Armoniack, cleanfed from its common or Sea-Salt; set it to be dissolved, until the whole (by the benefit of the Salt) be dissolved into a most clear water: this is the precious ferment for the Red Elixir, and the true body made solvinual.

VI Take Gold, diffolve it in its own water, and decoct and prepare it, by boiling it away to a third part: then expose it to the Air, and set in Balneo or in Dung for certain days; then will it be the Oil of Gold; so will the ferment of Sol be perfect for the

Red, which keep for use.

## C-H A P. XXXI.

Of Venus, or Copper.

I. V Enns is the finest of the base Metals, and contains more of a Golden Sulphur than them all.

II. She is Whitened, and made like unto Silver, by calcining it with butter of the daughter of Luna, and Salt of Tartax, and then reduced by Saturn, and being often melted and extinguished in the said butter.

III. Or thus, To the afore reduced Venus, being melted add (for an ounce of Venus) two penny weight

of our white fixed Mercury.

IV. She is made of a Golden colour by often chang-

ing the cale. (calcined with the Son of Saturn) in the spirit of Animony, Zink, Lapis Calaminaris, and lapis ratia: then reduced by being melted with a sufficient quantity of Lapis Tutia, and ten or twelve times melted, and quenched in the aforesaid spirit.

V. Her Silver is extracted as that of Tin by the third Self. of Chap. 28. Or thus, Calcine her with butter of the daughter of Luna, to which calx adjoin the

calx of Luna ana; and reduce with Saturn.

VI. Het Gold is extracted thus: Calcine her with the Son of Saturn: then calcine Luna with the same also: put both these calces together and calcine for three days with the son of Saturn mixt with Tellus; to which add the Calx of Sol calcined with the same son of Saturn, ana; put all together and calcine them for twenty four hours, reduce them with Antimon, keep them all in a melted heat for three days, then take it forth, and quench it being melted ten or twelve times in the tinging and fixing spirit of Lapis Calaminaris; "Antimony and Zink, ana.

This is very profitable, and not difficult to perform; it

may be done also ( as before ) without calcination;

VII. Venus is made of a filver Colour thus. Take Mercury fublimate, and a proportionable quantity of Sal-armoniack; add Vinegar, and let them boyl together: in this quench Auricalcum or Copper (being heat red hot) and it will become white like Silver.

VIII. She is made of a Gold Colour thus. Take copper, Lapis Calaminaris, of each half an ounce: Lapis Tutia 2. drachins: let the Copper be first heat red hot and extinguished 2. or 3. times in Urine: do the like with the Lapii Calaminaris and Tutia: To the Copper thus prepared add Honey half an ounce, boyl them together till the honey becomes black III he and

and dry: which take and bear with the Lapis Ca-Jaminaris and the Tutia, then mix all together by melting, and you have your defire.

IX. She is whitned that. With purified and reduced Litharge mix fublimed Arfenick; and caff, it upon

Copper in fusion; it whitens it very well.

X. Or thus. Mix filver and Copper together; and upon that mixture cast the Whitning medicine. For the filver is a greater friend to Arlenick, than any other metall; it also takes away fraction from it.

XI. Or thus. Upon a mixture of Venus and Lana melted cast pieces of sublimed Arsenick, and Mercury: They are better in pieces than powder, because the powder consumes and vanishes sooner, or be-

fore it can do its operation,

XII. Take Mercury precipitate, and Copper Calcined, diffolve each a part in a diffolving water and mix the diffolutions together; coagulate, and put the whitning medicine on it, and it will be exactly like Silver.

XIII. Or thus. Take Mercury precipitate, and Litharge, diffolve each a part: joyn these solutions in one: then take the Calx of the body you intend to whiten, diffolve it: join all these together; coagu-

late, and reduce with Borax.

XIV. Or thus. Take Quick-filver, sublime it so esten from precipitate Mercury, till it be fixed in it, and sprouts forth, put this upon melted Copper,

and it will be very white.

XV. Or thus. Diffolve leaf filver and Litharge in a proper diffolving water: join these Solutions together; and by these the substance of Copper will be Whitned.

XVI. Or thus, It is also whitned with sublimed Arsenick: Take calx of Copper, mix it with sublimed Arsenick. Arfenick. Reiterate the Sublimation, and continue it till the Arlenick stay with it: this will be the more easie and firm if a quarter part of the Calx of filver be added to the faid Calx of Copper.

XVII. Or thus. Put the sublimed Arsenick to the filver; and then the whole upon the Copper, and it will be excellently whitned; Or mix Litharge, or Calx of Lead diffolved with filver, put this upon Arfenick; and laftly cast all this mixture on the

Copper body and it will be very white.

XVIII. To prepare Copper. Cement very thin plates of Venus with common Salt well cleanfed in a crucible covered and well luted, for 24 hours : this cementation repeat ( scraping off what is calcined) till all the plates are confumed. Grind this Calx to a most Subtil powder and wash it with Vinegar, till it comes from it Colourles: imbibe it again with Salt and Vinegar, Grind, and calcine in an open Veffel for a days: take it out, grind, and wash well with Vinegar, dry, and addhalf its weight of Sal- Armoniack, grind tillit is impalpable, and expose it to the Air to be disfolved, adding still fresh Sal-Armoni ck if need shall be, till the whole be made water. This is the water of the fixed fulphur of Venus.

### CHAP. XXXII.

# Of Mercury, or Quicksilver.

I. A Ercury is the Seed of Metals, and pure immaturate Gold.

II. By this the body of Sal is opened thus: make an Amalgama of Sol and Mercury so long till the Mercury will swallow up no more: Separate and Hh 3 you you shall find your Gold like Earth newly broken up; this Gold being put into the sweet oil of Salt becomes more perfectly dissolved, which being distilled till it comes over the helm will answer your intention: but there is a more noble and excellent way of opening of the body of Gold which here we may not declare, yet in its due and convenient place shall be manifest, and that is only by the help of a perfect sweet, or rather inspiral mensure.

III. To make our white Mereny; this is only done by a fimple diffolution in the aforesaid inspid menstrum.

By this white Mereny; is Copper made of a du-

rable white, after a thousand meltines.

IV. To make our red Mersing; this is done by a diffolution in the spirit of Tellus, and then tinged by the mineral spirit of the Grape: and lastly fixed by the green spirit of Venus. This will perfectly unite with Gold, never more to be separated by all the Art of man.

V. Take Quickfilver 2. or 3. times purified with Sal-Armoniack and Urine; put it into a Crucible over a temperate fire; when it waxes hot, put prepared Jupiter thereon and as much and augment the fire by degrees, till the flame grows blew: make the fire then stronger, and blow a little: when you see it begins to give over smoaking, take it from the fire, and you will find your filver considerably augmented.

VI Take Sulphur of Venus, pure, red, and fixed, but melting like wax: cast it upon purified Mercury, in a just proportion, and in a fit heat; and

the Mercury will become good Gold.

VII, To harden Quick slaver. It is done with the fumes of either Saturn or Jupiter. Melt Jupiter, and when it begins to be cold, make holes in it, and put your Quicksilver therein, and it will be hardned, which being repeated often, will be the more firm-VIII. Take

VIII Take Mercury and Salt-peter, ana; beat them into dust, put them into a Glass well luted, over a gentle fire for 2 hours: augment the fire, till the smoaking ceases: after the smoak comes a same out of the neck of the Glass, and the Mercurial Sulphur remains in the bottom, as it were white and fixed. Take it out, and add to it an equall quantity of Sal-Armoniack; beat them to 2 powder and mix them well; sublime, first in a moderate fire; then in a stronger; so continuing for 4 hours: take this sublimate, and sublime it again with its faces 6 times, so will the sulphur remain in the bottom of the Vessel: take it, beat it to powder, and on a Marble, let it resolve to an Oil: This is sulphur of Mercury for transmutation.

IX. Take purified Quickfilver 2 ounces: leaffilver one ounce: make an Amalgama, and let it stand 2 days, then sublime there from the silver, wash it in water clean and dry it. Take this Calx of silver and dissolve it in Aqua fortis, and evaporate to dryness: mix this dry Calx with Borax, and melt it into a Mass: Take of this silver and mix it with the like weight of sine Gold and you have a prepared body to be tinged of a Gold Colour: Make of this an Amalgama with ten times its weight of purified Quicksilver: abstract the silver, and you have a porous

body, fit to receive the tinging medicine.

X. The ferment of ferments. It is made for the white after this manner. Take Ferment of Luna with its Oil (at cap. 33. Sect. 6. and 7.) add to it twice as much Arienick, sublimed and dissolved in its proper water: then to both these add Mercury dissolved as much as the Arienick: mix the waters and set them over a fire for one day to be incorporated: then draw off the water by an Alembick, and Cohobate it 15. times; so incerating, it will be H h 4

fluid as fusible wax. Add as much melted Wax, commix, and project upon Mercury washed, as you

defire.

XI. The ferment of ferments for the Red. Diffolve Solin its own water; add to it Sulphur, diffolve it in the fame water, parts: Mercury diffolved 3 parts: let all be truly diffolved into a most clean water, which being mixt, boyl for one day, that they may be fermented, draw off, and cohobate the water, s. times: Incerate with yellow Virgins wax, with half its weight of Oyl of blood or Oyl of Eggs: then project upon Crude Mercury, and you shall have your desire.

## CHAP. XXXIII.

of Luna, or Silver.

I. L'Una is the meanest of the fine Metals, and) as it were) white Gold.

But Luna differs from Gold, more than in the Colour only; viz. in Weight too, and that very

confiderably.

II. She is tinged of a Golden Colour by our red Mercury (calcin'd per se for twenty eight days in a Pelican or other convenient vessel, till such time as the said Mercury will endure the strongest sire) the yellow colour this Mercury gives is fixed.

IV. Her Gold is exactly extracted by the method

delivered in Chap. 31. Sect. 6.

Or thus. Take Sol, Luna, Venus, of each a like quality; melt them together, and keep them in tuffon for 7 days: then take them forth, and by the Refiners Art separate the Gold; you will find your

Our

your Gold (if you have been earefull in the operati-

on) to be augmented nearly an eighth part.

IV. Or thus. Calcine her with the Son of Saturn, to which add of our red Mercury, ana. put all into Ott of Salt for ten or twelve days; heat it red hot, and extinguish in oil of Flints or Sand ten times; to this salx add of fine Lapis Turia ana. reduce all and separate

with Antimony.

V. Take Sal-Armoniack 2. pound; purified from its common or Sea Salt: pure Vermilion one pound: Grind them together and fublime; fo will the Vermilion be at bottom: Grind them again together and Sublime 6 or 7 times: then lay the Vermilion on a Marble stone to dissolve into water. which keep for your work. Take pieces of fresh Vermilion (iii) wet it in the former water, and afterwards in the Glair of Eggs: and roul it in the filings of fine filver zij, fo often till it has taken up all the 2 ounces of filver. Put these into a firm Iron Pot. which may be closed with a strong screw : put it into a furnace, give fire by degrees, and increase it graduting to the highest degree, continuing it so for a philosophical month, and you will have a medicine for transmutation of Copperinto filver, which being tryed upon the Test with Lead, will prove good at all affays.

VI. The preparation of Luna. Luna or filver is subtilized, or attenuated, and reduced in manner as is above said of Sol. Therefore in all and every part of this work, do the same in its subtilization, as you did with the Gold. And this water of Luna is the

ferment for the White Elixir.

VII. Dissolve Luna in its own Corrolive water, which water boyl away to a third part; then expose it to the Air, or set it in Balneo, or in Dung for certain

certain days; so have you Oyl of Luna, and the ferment of the white perfected

## CHAP. XXXIV.

Of the secret Hermetick Mysterie, or great Philosophick Work.

TE cannot be so vain as to pretend to the world V that we have attained the knowledge of this great Secret, much lefs fo to be the Mafter thereof, as to be the instructor of other men: but this we can fay, we have converst with most Authors that have wrote thereof; we have with a great deal of diligence and findy compared their sayings one with another; and we have by a long and continued exercise and practice in the Mineral work, found out not only the natures of Metals, and in what degrees of purity they stand in one to another 3 but we have also found out many excellent Secrets, of real Worth and Value, by which, although we cannot profess a knowledge of the great work it self, yet we thereby fee not only a possibility, but also a probability thereof in wature ( to that men whom it shall so far please God to enlighten) and therefore judge we may in some measure the better undertake to discourse the sayings of those Worthies, who having attained this Mysterie thought good in Cloudy and Mysterious terms to publish the same to the world, that none but the truly worthy Sons of Art might be partakers of the fame.

In the following lines then, we shall tell you what has been told us, and what we doconceive thereof by the comparing of the sayings of the most excellent men together, such as were Paracelsus, Basil, Lullius, Ripley, Bacon, and others; and this in so concise a manner, that the opinions and judge-

ments

ments of all those men (though far asunder in words) may center not only in truth it felf, but also in the narry compass of the following Sections; the which that we might so perform, we express our conceptions of their sense in a language consonant thereto.

I. The feed of Gold is lodged in all Metals:

This is apparent from their generation, whose origination is Mercury, which is indeed immaturate Gold, and so remains immaturate in the baser Metals till a ripening and meliorating spirit quickens that seminal property lodged in the womb of impurity.

II. This feed of Gold may be quickned or made to

hve.

This is done through the death of the first matter, and disposition of the second to a resuscitation or resurrection of that innate, energetical, and seminal life, and that only by the spirit of Tellus.

III. This semen being quickned, dilates it self into other bodies, and transmutes them into its own pro-

perty.

That is, just as the seminal life of Vegetables transimutes or changes that succus or humidity of the Earth proper to themselves into their own forms and natures; and so of a little seed there becomes a great tree: so that as the Earth is the womb out of which so small a seed becomes a great tree, by the transmuting property of the innate seminal life in the seed: so all the base Metals are the womb unto that seminal purity: in which womb if the seed be disposed rightly, there will be as certain a generation and encrease; and the purity of the base Metals will be transimuted into that seminal property to a vast augmentation.

IV. That

IV. That this may be rightly dine, the bodies of the bafe.

Adetals must be opened and prepared.

That is, they must be brought into a mortification. that that firong band which has hitherto chained the feminal life, may be broken, and to the energetick vertue may be fet at liberty: this is performed by the flying dragon who devouts all that he comes near: this being done, the fomen must be cast into this mortified body (impregnated with the spirit of Telles ) that it may there generate, transmute and fix.

V. This way be done in any of the bafe Metals : but they (like the Earth ) yield an encrease according to their degrees in purity; so that more of the body of a pure Metalis.

transmated, than of an impure.

Asbarren Earth cannot yield so great an encrease as a fertil foil; so neither can a base Metal yield so great an augmentation as a more fine.

VI. The bodies of the baser Metals being sitted, the

femen must be cuft into the fame to generate.

That is, there is to be a conjunction of the former. or true Golden essence with the prepared body to be transmuted: now you must be careful you use not the simple body of any Metal for this femen, for thenyou will be deceived; the matter in which the generative spirit is lodged is another thing: if you bury a whole tree or plant in the Earth, that will not generate, and bring forth another tree, but perifh and rot, the feminal or generative vertue and life is clog'd and loaded, and so is ineffective; but if you bury the feed of the fame tree, you may have another or more according to the quantity of feed fown; the same you must understand in the generation of Metals, and of the Golden work; it is not Gold which will generate Gold, but the feed of Gold.

VII. This

VII. This femen must be Volatile.

Otherwise it cannot transmite, for nothing but a Votatile spirit or essence can dilate and spread it self: a fixed matter cannot operate at all; for all fixed things are dead, and their life remains in a central state, not fit for coastion. This is evident in the Votatile Salts of Vinegar and Quick-time, which surpass the Art of man to attain simple; but it you mix a Lixivium of Quick-time with Vinegar, you may have a large quantity of Salt; and that fixed, which was before unattainable. Thus you see out of two Volatile things, a third absolutely fixed is produced; and this is the condition of this great work.

VIII. It must be of an unchangeable blood-red colour.

Otherwise it could not tinge; for were it only yellow, it would create only a faintish kind of green: but this our Philosophick tincture generates Gold of the highest and purest nature, and having the deepert yellow:

IX. This Semen is made Volatile by the destruction of

its external form.

That is, nature must be brought to action, that the inactive body may let fall its Some, out of which the Golden tree of the Philosophers is produced.

X. This Semen is made blood red by impregnating of it

with the spirit of Tellus.

It is necessary that there be a common band to conjoin the bodies, which are to be united: as the bodies of the base Metals which are the words for this seed are to be mortified; so must that body be, out of which you extract the Semen, and as that mortified and prepared body is to be impregnated with the spirit of Tellus, fo must this Semen, that there may be as well a sympathy and likeness in nature, as an unity in body.

XI. The

AL. The matter out of which this Semen is to be ex-

tracted is Mercury or Gold.

We mean simply, and without Metaphor, Quickfilver and Gold; for if there be an innate life, power and vertue, in the base Metals, why not in these if Lead, Tin, Iron, Copper and Silver, contain the Seminal life of Gold, why should Marcon or Gold be excluded, which are the thing it self?

XII. The Semen being cast into the body prepared for it, is there to be digested, till both be perfectly united, whose simple conjunction is the product of the Golden kingdom.

This digettion is perfected only by the force of an external fire, conjoined with the inward Seminal life.

# GHAP. XXXV.

A Rational Demonstration of Chiromantical figna-

I. The foundation of Chiromancy depends upon the true appropriation of the feveral mounts, fingers, or places in the hand to their proper Stars

or Planets.

II. The Antients have affigned the root of the middle-finger to Saurn; of the fore-finger to Jupiter; of the hollow of the hand to Mars: the root of the Ring-finger to Sol: of the Thumb to Venus: of the little-finger to Mercury: and lastly the brawn of the Hand near the Wrist to Luna.

III. That line which comes round the ball of the thumb towards the root or mount of Inpiter is called Linea Jovialis or the life-line: that from the wrist to the root or mount of Saturn, Linea Saturn

nialis :

minis: but if it points to the root or mount of Sol, Linea Solaris, if to Mercury, Linea Mercurialis: that which goes from Linea Jovialis to the mount of Linea, Linea Linearis, or the natural line: the other great line above it is called Linea Scollata, or the line of fortune, because it limits the mounts of the Planets, and is impressed with various veryes in those places according to the nature of the Planet whose mount it runs under or sets a boundary unto: Lastly, the space between the natural line and the line of fortune is called Monsa, the Table.

IV. All other lines shall either proceed out of the sides of the former, or else from some proper

mount.

V. Every line great or small, long or short, hath a certain beginning or root, from which it rises, and

a certain end or point to which it tends.

VI. The diffance between both ends, is the way of its paffage; in which way, it either croffes some ether line, or else is croffed; if it do neither, its fignification is continual, and ought so much the more to be taken notice of.

VII. Every mount hath a proper fignification, which it receives from the fignifications of its proper Planet, being abstractly confidered the same

understand of all the principal lines aforefaid.

VIII. Saturn is the Author of Age, Inheritances, Melancholy, Malice, Sorrow, Milery, Calamities, Enemies, Imprisonments, Sickness, Diteases, Perplexities, Cares, Poverty, Crosses, Death, and, whatsoever evil can befall humane life: be fignifies Fathers, Old Men, Labourers, Dyers, Smiths, and Jesuits.

He also signifies one Austere and Satyrical, with a head declining, eyes fixed upon the Earth, hanging lips

and a fullen Counterlaises, wasting himself with a furious filence. He gives a Complexion or Colour between black and yellow, Meager, Differted, of an hard skin, eminent Veins, fmall Eyes; Eye brows almost joyned together, a thin beard, thick lips, caff down looks, an heavy gare, and frambling as he goes. He fignifies Entry, and Broious men, a Way-layer or Padder upon the high-way, But where he is well placed he fignifies one fubril, wife, or witty, intelligent, ingenious, one of profound thoughts, given up to feeres cona finder out of things that are loft.

IX. Supiter is the Author of Health, Strength Moderation, Sobriety, Mercy, Riches, Substance, Goodness, Liberty, Religion, Honesty, Justice, Modefly, and all other things which may make a man happy he figuifies Churches, Church men, Lawyers,

Scholars, Cloathiers, and the like

He signifies one good natured, fortunate, fweet, pleasant, well wisher; one honest, neat, of good Parentage, and bononrable. He gives chearfullness, right judgment, truth, beavenly wisdom, understanding, and is the bestower of Riches, goodness and Vertue. He denotes one merry ingemens, fair, Honourable, hospitable, kind, and every ways good. He presignes a man of a sangaine Complexion between white and red, of a delicate bady, good stature, high fore-head, and a head lifted up; Eyer formershat big, floors mofrils, large teeth, a light coloured beard, a tall complem body, honest, just and fair condition'd.

X. Mars is the Author of Strife, Contention, Pride, Prefunction, Tyramy, Thefts, Murders, Victory, Conquelt, Infortunacy, Boldness and Dangers: he fignifies Phylicians, Chirurgions, Apothecaries, the Camp, all Military men and Preferments, Edge-tools, Butchers, Carpenters, Gunners, Bailiffs,

and the fike.

He is the author of War, fighting; blood; and strife, and signifies one strong, bold, quarrelsom insolent, a Traitor or a subverter and over-turner of States and Kingdoms. He gives power and might, heat and burning, and signifies Violence, contention, Impudence, and all disordered, inconsiderate, and heady actions. His countenance is terrible, cruel, sierce, angry, proud, hasty and impersous. He gives a red complexion, deep yellow or black hair, round Visage, siery Eyes, and a savage revengeful look well placed, he signifies Chirurgeons, Captains, Commanders, and great men under military discipline:

XI. Solis the Author of Honour, Glory, Renown, Preferment, Life, Generofity, Magnanimity, Soveraignty, Dominion, Power, Treafures, Gold, Silver, and whatfoever may make the life of man fplendid; he fignifies Kings, Princes, Rulers, and all men in Power, Minters, Gold-smiths, long Life and Wisdom.

He lignifies one of a noble and Generous nature, fortunate, houeft, neat, prudent, Intelligent, wise, the government and bestower of life and beauty, and the dispeter of Evil, whence the Greeks sometimes called him 'Analinguov and Phoebus. The Hebrews call him UOU Shemesh, from Ministering or Serving; he being the chief Minister and Servant of the whole World; and the Arabians DOU Shames. He gives courage, Honour and Majesty, a man considerate, wise and prudent, one of a middle stature, comby personage, curled hair and brownish, of a red or sanguine Complexion, trusty and magnanimous; but being ill placed vain-glorious and a Tyrant.

XII. Venus is the Author of Joy, Pleasure, Mirth, Solace, Lust, Uncleanness and Idleness: she fignifies Woman-kind, Sisters, Ladies, Whores, Curiofities, Lapidaries, Silkman, Taylors, Mercers, Upholsterers, Pictures, Picture-drawers, the Pox, and Diseases

proceeding from uncleanness.

She signifies one mild of disposition, fair, beautifull pleasant and merry, given to mirth and jollity; and the Anthor of fruitfulness. She foreshows joy, friendship, mercy, bounty, Love, sports, dalliance, dancing, embracing, Kissing and such like. Being hos and moist, she is the mistriss of Generation, makes an amiable, pleasant and chearfull countenance, prestily mixed with Red: she gives a compleat body encliming to tallness, fair and round visaged, with beautifull rowling Eyes, brown or slaxen coloured hair of a lovely disposition, gentle, bountifull, conrecons, asfable and merciful. Being ill placed or disposed, she signifies Whores, Strumpets, Bands, Pimps, Panders, Thieves, and such the.

XV. Mercur, is the Author of Craft, Subtilty, Policy, Deceit, Perjury, Study, Hearing, and Merchandizing: he fignifies Merchants Clerks, Scholars, Secretaries, Ambassadors, Pages, Messengers, Poets, Orators, Stationers, Cheaters, Thieves, Petty Lawyers, Philosophers, Mathematicians, Astrolo-

gers.

He fignifies one swift, nimble, eloquent, industrious mise, Rational, a diver into abstruct mysteries, good with the good, had with the bad, male with the male, and semale with the semale, an interpreter or expounder of the mysteries of nature; one mutable, changeable or inconstant, lively, prompt, and of a ready wit. He gives a complexion neither very white, nor very black, a long Visage, an high swe-head, small Eyes, brown or almost black, an even nose and something long, thin heard, long and sender sugers, one busic, subtil, witty, sharp, and many. Being ill placed or disposed, he signifies, Thieves, theating Solicitors, Knavish Euryers, Knights of the Post, Witches, Wienrids, Diviners, &c.

NIV Land is the Author of popular Fame both good and evil, Joy and Sorrow, Mutability and Inconstancy, Affection, and Disaffection, Moisture and every

Chap. 35. Of Chiromantical Signatures. 483

every effect which may be faid to be common: she fignifies Waters, Ships, Seamen of all forts, Queens, Ladies, a Governels, the Common people in general, Neighbours, Mothers, Kindred, Fishmongers, Vinturers, Tapsters, Midwives, Nurses and Travellers.

She is the manflator of light from one planet to another, imparting her light to all the other Stars, and comprehending or receiving their Virtues and powers. She gives cold and maisture, feminine bonour and Glory, Chastity, pitty, mercy and the subduer of carnal Affections, taking care of all flates and tonditions of men both by Sea and Land: her influence it over tempests and storms at Sea, over the birds of the Air, and the beafts of the field; over Serpents at Lund, and fishes in the Water, making things to ebb and flow, according to her decrease or increase. She shews one moveable, benigne, innocent, simple, chaste, and carians: gives a pale countenance, middle stature, round vifage, and either black, brown or gray Eyes, according as the is aspected, and the sign she is in a tender body, fleshy, and of a faft and fmooth fkin; one that is facil or eafie to be entreated, an affecter of news and new things, inconfrant, &c. being ill placed or disposed, the fignifies one beetle brower, ill natur d and a Scold.

This being known, understand,

XV. First, That the lines take their fignification from the mount of that Planet from whence they rife.

XVI. Secondly, That the place from whence any line rifes thews the ground, caufe, or original of the things figurified by that line; the line or mount to which it points, thews the iffue, to what the thing tends, and what may be the end of the matter fignified.

XVII. Thirdly, That whether the line fignifies good,

I i 2

or

evil, if it be cut or croffed by any other line, that line so cutting it, will at a certain time not only abate the good, but also take away the evil, if it so fignified.

XVIII. Fourthly, That the nature and quality of that line thus destroying the fignification of the former, is known by considering from what place it

rifes, and to what place it tends.

Every line, by accounting it, first, from the one end;

fecondly, from the other.

XX. Sixthly, That little lines rifing out of the fides of any other line, both augment the things fignified by that line; and also fignifie new matter arifing by things fignified by the line from whence they rise; and the place to which they point, shew to what they tend.

XXI. Seventhly, That the mounts or lines adorned with Stars, or small lines not crossled, or pointing to evil places, shew great good and happiness to the person, by things signified by the same mount or line: and on the contrary, vitiated with crosses, spots,

or knots shew much evil and perplexity.

XXII. Lastly, The beginning of the lines, shew in the beginning or forepart of Life; the middle, in the middle part of Life; and the ends of them, the latter part, or end of Life; so that if any evil or good be signified by any line, you must hint the time ac-

cording to the aforefaid reason.

XIII. From these rules (being observed) you may attain to the knowledge of the natures, qualities and dispositions of all forts of people, their Affections and Passions, answerable to the Vertues and Insuences of the Stars and Planets which the antient Mathematicians and Astrologers have by long experience taken

taken notice of and observed, as does sufficiently ap-

pear by their works.

Tis true, here we ought to enquire into the denominated times when the things signified should come to pass; but because that matter is something long and abstruse (being more sit to be handled in a particular tract, wherein all its curiosities may be examined) this our present work being a subject of another nature, and these things not essential to our purpose, we shall at this time forbear. Notwithstanding, although we have not here delineated every thing in particular, yet we have luid (as it were) the ground and soundation of the Art, out of which, as out of a sountain, the industrious Student may at his own leisure and pleasure, rear a stately fabrick. Be pleased to view the second sigure of the hand, in which the numbers signify years: therein you may partly see the Geometrical reasons of that measure of time.

# CHAP. XXXVL

Of the Line of Life.

I. K As dawn [ Linea Vitalis ] The Line of Life is that which includeth the Mount of the Thumb. II. This Line broad and of a lively colour well or largely drawn without interfections and points, shews long life and one subject to few diseases; but slender; short and broken or cut with little cross lines, of a pale or black colour, shews short Life with many infirmities.

III. If it makes a good Angle with the Hepaica, and the Angle be adorned with parallels or little Croffes, it shews a good wit and a pleasant disposition.

IV. This Linea Vitatis abounding with branches to-

wards the upper end, and those branches extending themselves towards Linea Hepatica foreshew riches and honour, but if those branches descend towards the Restricta, they threaten poverty, contempt and deceitful servants.

V. If this line be cut with little lines like hairs, it fignifies diseases, which if they fall towards the Heparica, shows in the younger years, in the middle of the line in the middle of the Age, if towards the Refricta,

in the latter years.

VI. If this line be any where broken, it threatens great danger of life in that Age which the place of the faid breach betokeneth, which you may find out with a great deal of exactness, if you divide the line into ninty equal parts, beginning to number them from A towards B.

VII. If the Character of Sol, (who. o) be found in this line, it shows the loss of an Eye, if two such

figures, the lofs of both Eyes.

VIII. A line passing through this Vital to the Tri-

misfortunes in journeying.

IX. A line proceeding from the Vital beneath the Angle it makes with the House to the Moune of Saturn, there is an envious man, as also forme dangerous Saturnian difease, as a Consumption, & which shall fall in those years fignified by that part of the Vital Line which the said Line toucheth.

X. But such a line passing from the Vital to the ring singer, shows honour and wealth, and that by

means of some noble woman.

ed with purallels or Indo Con ...

colleged this substitutes

acidodib in wild a beauty boone HAP.

#### CHAP. XXXVII.

## Of the Epatick, or Natural Line.

I. THE Natural or Liver Line is that which runs from the Life line or Mount of Jupiter through the middle of the Palm, terminating generally upon

the Mount of Luna.

II. This line straight continued and not cut by other oblique lines, shews a healthy constitution and long life, but short or broken, not reaching beyond the middle of the Palm, signifies a short life replete with many difeases.

III. The longer this line is, so much the longer life it signifies, if it be cut at the end thereof, it threatens

the end of Life with some dangerous disease.

IV. If any breach appears, (yet such an one as seems almost continued) it shews a change of life, if under the middle singer, in strength of years, if under the ring-singer, in declining Age.

V. If the upper part of it be far distant from the Vital, it shews manifold diseases of the heart, and

also a prodigal person.

VI. If it be crooked, unequal, of various colours, and cut by other lines, it shows an evil habit of the Liver and diseases thence proceeding, one ill natured and foolish.

VII. If Araight drawn and well coloured, thews

wit, honour and health.

VIII. If it has a parallel or lifter, it gives inheritances.

IX. If continued with little hard knots, it shews Murder according to the number of those knots.

I i 4. X. If

X. If it terminates with a Fork or Angle towards the Mount of Luna, it shews a foolish, hypocritical, ill-natured person; if it tends to the Mensal, it shews a flanderous and envious person.

XI. When it cuts the Vital eminently to the Mount of Venus or foror Martis, especially if the same be of a ruddy colour, shews danger of thieves and many ill diseases, threatning life.

#### CHAP. XXXVIII.

Of the Cephalica or head-line.

I. The Cephalica ariseth below from the Cardiaca, and is drawn thence to the Epatica, thereby making a Triangular Figure.

II. Making such a perfect figure, and it having a lively colour, without intersection, declares one of great prudence, and a person of no Vulgar Wit or Fortune.

III. So much the more perfect the Triangle, so much the more Fortunate, and it shews a man very wife, temperate and couragious.

IV. If the Triangle be obtuse, it shews an evil nature, clownish and rude, if there be no Triangle, it is still worse, and shews the person to be foolish, a liar and prodigal, and generally one of a short life.

V. The higher Angle being Right, or not very Acute, shews a generous man; but if it be very acute, or if it touch the Line of Life under the mount of the middle finger, it declares a miserable, hard and covetous wretch, it also foreshews a consumption.

VI. The left Angle made upon the Epatics in the ferient (being a right Angle) shews a profound understanding.

VII. The

VII. The Cephalica casting unequal and irregular cless to Mons Luna, thereby constituting strange Characters, shews a dull head, and danger by the Sea, in Men: but in Women, discontents, miscarriages and the like.

VIII. But casting equal lines, it presages the contrary in both Sexes: to wit, in men wisdom, and success at Sea, and in Women, contentment and happy child-

bearing.

IX. If the Cephalica make a cleft or apparent Star, upward to the Cavea Martis, it shews boldness, and magnanimity of mind: but if it let the same fall downward, it manifests deceit and cowardise.

X. The Cephalica joined to the Restricta, by a remarkable concourse, shews a happy and joyful old

Age.

XI. But if it be drawn upwards, (in form like a Fork) towards the place of Fortune, it shews much subtilty and crast in the management of affairs.

XII. If in this Fork the Character of & Sors be found, it shews Riches and Honour, by the mans own

industry,

## CHAP. XXXIX.

Of the Mensal Line, or Line of Fortune.

I. The Menfal or Line of Fortune (called also Linea thoralis) takes its original from under the Mount of Mercury, and extends it felf towards the Mount of Impiter.

II. This line if it be long enough and without incifures, shews strength of body, and constancy of mind; the

contrary if it be short, crooked or out.

III. If

III. If it terminates under the Mount of Sature, it thews a feelife, idle and deceifful person.

IV. If in this line be found certain pricks or points,

it Thews a lecherous perfon.

V. If the Epatica be wanting; and the menfal be annexed to the Viral, it forethews either beheading,

banging or other unimely death.

VI. If from the Mounts of Jupiter and Saturn, another to the space between the Mounts of Jupiter and Saturn, another to the space between the Mounts of Saturn and Sol; and a third to the space between the Mounts of Sol and Marcary, it signifies an envious, surbulent and contentious person.

VII. A little line only thus drawn to the space be-

forrow.

VIII. If annexed to the Epolica, making there with

an acute Angle, the fame.

IX. The Adensal projecting finall branches to the

X. But if it be raked or single, it thews poverty and diffres.

XI. If it cuts the Mount of Impiter, it shews a cove-

tous mind, and great pride.

XII. If it fend a branch between the Mons Jovis & Saturni, it shews in a Man, a wound in his head; but in a Woman, unifearinge or danger in Child-bearing.

XIII. Confused little lines in the Mensal, shew sickuels and diseases: if under the Mone Sammi, in youth, under the Mans Bette, in the middle Age: ander the Mone Mone wil, intold Age.

XIV. Lastly, If there be no Mensatat all it fliews

one faithleft, buft, inconfrom and malicious.

#### CHAP. XL.

# Of the Restricta, or Cauda Draconis.

I. The Referibla is that Line which divides the Hand from the Arm, either by a single, deple, or triple transcarfun; thereby determining the about-user or subject of Art; which by some is called the Discriminal line,

II. If the Restricta be double or treble, and extended in a right and continued tract, it shows a beathful

constitution of body, and long life.

III. That line which is nearest the hand continued without inciders, and of a good colour, shows riches.

IV. But if it be pale or crooked or cut in the middle, it

thews weakness of body and poverty.

V. A line drawn from the Refricta to Mons Lune, shews poverty, imprisonment and private enemies.

VI. If that line be crooked, it doubles all the evil,

and shews a perpetual flavery or misery,

VII. Bur fuch a line being clear and ftraight, and extended to the Moss Lana, shews many journeys and tendrinations both by Sea and Land.

VIII. If it extend to the Mons fovis, it foreshews of interior and Ecologicalist dignity, but that the man

fhall live in a firange countrey.

IX. If to the Epasica, it show honesty, truth and

fincerity, and one of a healthful and long life,

X. If to the Moss 30%, a great and certain good, and gives honour and command in the Commonwealth.

XI. And to from the fame reason, passing to the

Mons Mercurii, it shews a learned and ingenious soul: but if it reach not that Mount, but is broken about the middle, it shews a lying, prating, idle person.

XII. If it ascends directly to the Mons Saturni, it shews an inheritance in Land: but if it be crooked, it shews a covetous person, and one of a very ill

nature.

XIII. A line running from the Restricts through the Mons Veneris, shews poverty, advertity and want, and that by means of some women or woman-kind.

XIV. A Cross or Star upon the Restricta, shews a'

happy and long life.

XV. One or more Stars upon the Restricta by the Mons Veneris in Women, shews lewdness, dishonour and infamy.

#### CHAP. XLI.

Of the Saturnia, or Line of Saturn.

I. This Line is that which ascends from the Refritta through the middle of the Vola, to the Mons Saturni, which line if it be cut or parted, is called

Via combusta.

II. This being full, and extended to the Mons Saturni, shews a man of profound cogitations, of great wisdom, and an admirable Counsellor in all great actions.

III. If it be combuft, it is an evil fign, foreshewing many misfortunes, and poverty in one part of life.

IV. A line drawn from the Vital through the Epatica,

to the Mons Saturni, making an angle with the Linea Saturnia, foreshews imprisonment, and captivity, and many misfortunes.

V. The Saturnia bending backwards in Cavea

Martis towards the ferient, the same.

VI. This line filled with unufual and inaufpicious cha-

ratters shews unhappiness and disasters.

VII. A gross line running from the interval of the Mons Jovis to the Mensal, and breaking or enting of it, shews diseases or wounds in the belly or parts adjacent.

#### CHAP. XLII.

Of the Mount of Jupiter.

I. THE Mount of Jupiter is the tuberculum under the fore-finger.

II. If upon the Mount of Impiter there be a Star or a double cross it foreshews riches, prosperity, and happiness, one born to noble and glorious actions, one honest, affable, courteous, and renowned, a generous soul indeed, and faithful in all their undertakings.

III. The same, If this Mount is adorned with a parallel line, or a line sweetly drawn, between it and the Vital; it shews great dignities, and estimation with

great Men.

IV. But if this Mount be vitiated, with a Charater like a half Gridiron, it shews unhappiness, calamities, poverty, differace and deposition from homours and dignities; losses by women-kind, and difeases in the heart and lungs.

V. The fame, If a line cutting this Mount, tends to

to the Mount or line of Saintn; this also threatens

an Apoplexy.

VI. Lastly, A Cross, but especially a clear red Star on this Mount, is a lignal and sure demonstration of a splendid life, repleat with honour and glory, riches and an Eternal name.

#### CHAP. XLIII.

Of the Cavea of Mars, and the Via Martis.

I. The Cavea Martis is the hollow in the middle of the Palm, commonly called the Triangle of Mars, made of the three principal lines, to wit, the Cardiaca, Cephalica, & Epatica.

II. The Via or linea Martis (called also the Vital fifter and foror Martis) is a parallel to the line of Life

on the Mons Veneris.

III. Mars is Fortunate to often as the favor Mantis appears red, clear and tweetly drawn, and when either Spars or Croffes are found in his Causes or Triangle: and thereby is fignified courage, boldness, magnanimity, fortunde and strength: the man is imperious, strong and a great eater.

IV. But if the Triangle be infortunated by evil lines from the Mens Veneris or Lune, the perfon is litigious, scornful, proud, disdainful, dereicful and wicked; a Thief, Lecher, Robber, Murcherer, and shall have a life wholly filled with unhappings.

V. The Character of h Samen in the Triangle, thews

a danger of falling from fome high place.

VI. A croshed line afcending from the Triangle to the Mons Saturni, shews imprisonment.

VII. A line from the faid Triangle towards the Re-

Chap. 44. Of the Mount of the Sun, &c. 495

frieta, terminating under the Mons Lune, shews many

peregrinations, journeys and travels.

VIII. The forer Martis augments all the good fignified by the Cardiaca or line of life, but particularly it promifes fuccess in War, and the love of Women.

# CHAP. XLIV.

Of the Mount of the Sun, and Via Solis.

I. THe Mount of the Sun is the tuberculum under the ring-finger.

II. The Via Solis, is a right line running down from the Mount of Sol, to the Triangle of Mars.

III. A Star or Stars upon the Mons Solis, shews one faithful and ingenious, and that he shall attain to great honour, glory and dignity, be honoured of Kings, Princes and great men; one of a great and magnanimons spirit, wise, just and religious.

IV. But a perpendicular thereon cut or crost with a line from the Mons Saturni, shews pride, and arrogancy, a boaster, a poor base spirit, and one that shall fall

into irretoverable miferies.

CHAIL.

V. The Via Solis clear, and not broken, or cut by any ill line, shewshonour in the Common-wealth, and

the favours of Kings and great Princes.

VI. But it being cut or consused, or hurt by any line from either the Mount or line of Saturn, it shews the contrary, Poverty and the hatred of great men.

CHAP.

#### CHAP. XLV.

of the Mount of Venus, and the Cingulum Venes

I. THE Mount of Venus is the tuberculum of the Thumb.

II. The Cingulum Veneris or girdle of Venus, is a piece or fegment of a Circle drawn from the interval or space between the Mons fovis & Saturni, to the interval

or space between the Mons Solis and Mercurii.

III. A clear Star, or furrows that be red and transversly parallel upon the Mons Veneris, and is much elevated, shews one merry, cheerful and amorous; it shews also one faithful, just and intire, one with whom an incorrupted tye of friendship (being once made) is durable for ever: it also fignifies great fortune or estate and substance by a Sweet-heart or Lover.

IV. But this Mount infortunated by evil lines, or lines from evil places, and irregular figures shews a lecherous person, an adulterer, a poor, base, fordid wretch, who shall spend his substance on Whores.

V. The Character of the A Trine Aspect on this

Mount, shews a great fortune by Marriage.

VI. The Mount of Venus void of lines and incifures, flews a rude, effeminate and foolish person, and

one ridiculous, and unfortunate in wedlock.

VII. The Cingulum Veneris, or girdle of Venus, shews intemperance and lust in both Sexes, a base and bestial life; a filthy Sodomite, who abuses himself with beasts.

VIII. If it be broken or diffected, it shews infamy and

difgrace by lust and lechery.

CHAP.

#### CHAP. XLVI.

# Of the Mount of Mercury.

I. The Mount of Mercury is the tuberculum under the little finger.

II. This Mount happy and fortunate with a Star, or parallel crosses, or the Character of the A Trine Aspets, thews wit and ingenuity, and makes the person a gives him substance by Are and Science.

great Orator, gives him substance by Arts and Sciences, and the understanding of secret mysteries in Althymy, Musick, Painting, Astrology and Philology, and raises the person to dignity by means of his own wit,

prudence and industry.

III. But this Mount afflicted, or without lines, or hurt by a line from the Mount of Saturn, (cutting the Mount of Sol) or from the Triangle of Mars, shews a poor, low and dull wit, a person of no audacity or courage, a meer coward, a lyer, pratter, thief, cheat, traitor, and one faithless, and sometimes melancholy, mad or frantick.

IV. These judgements are the more firm where the lines and signatures are fair, firm and clear: but if they be dull or obscure, these judgements are more

dubious and intricate.

V. A line from the Mons Luna to the Mons Mercurii not cut or broken, shews a man eminent and famous in his trade or profession (among the common people) let it be what it will.

#### CHAP. XLVII.

Of the Mons Luna, and the Via Lactea.

I. The Mons Lunz (called also feriens à feriendo the smiting part) is the mount comprehended under the suberculum of Mercury, between the Menfal and Restricta.

II. The Via lattea, or Milky way, is the line running upwards from the Restricta through the serious

or Mons Lune.

III. The Mons Lune filled with happy Characters (as we have before hinted) shews one honest, just and honourable, and makes a man famous through a Kingdom, gives him the praise of the common people, and the acquaintance of great and noble Ladies;

and makes him happy in Navigation.

IV. But being infortunated by evil Characters, or a trapezia, or evil lines from the Triangle of Mars or lines broken, or cut with oblique Angles, it shews one of a various, poor and inconstant life, a beggar, a person envied by almost all people, one wicked, treacherous and deceitful, a person subject to travel, captivity or banishment.

V. If the good lines on the ferient be fair and comely, they premonstrate so much the more happiness, and in women fruitfulness: but the evil lines pale, so

much the more evil.

VI. The Via latter or milky way, well proportioned and continued, thews fortunate fourneys, both by Sea and Land, great wit, and the love and favour of Women kind, chiefly of Ladies and great Women.

VII. But

Of the Mensa or Table. Chap. 43.

VII. But if this line be cut or crooked, it shews unhappiness, and a poor and low estate.

VIII If it be whole and extended to the little fin? ger, it shews a great good beyond expectation.

# CHAP. XLVIII.

Of the Mensa, or Table.

THe Menfa is the interval or space betwixt the Mensal and Epatica, the which is given or attributed to Fortune, from whence the Table is called the place of Fortune.

II. The Mensa being large and broad, and repleat with good figures, shews riches and treasure, one of a

liberal magnanimous spirit, and of long life.

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III. But small and narrow, shews poverty or a slender and mean fortune, a niggard, a coward, a pitiful poor, fearful and mean foul.

IV. A little circle in the Mensa shews a great wir.

and a profound person in Arts and ciences.

V. The Mensa terminating in an Angle under Mons Tovis by the concourse of the Mensal and Cardiac or Vital line, shews falshood and treachery, and one of fhort life.

VI. A Cross or Star, within it, clear and of good proportion, especially under the Mount of Sol, shews honour and dignity, by means of great and Noble men, and encrease of Noblemen: if it be the Character of

4 Jupiter, it shews Ecclesiastical preferment.

VII. The fame Crofs or Star, being doubled or tripled wonderfully encreaseth the aforesaid good fortune; but cut or confused by other little lines, the said good is much diverted, and Anxieties and troubles threatned, Kkz VIII. Good VIII. Good and equal lines in the Menia, shew good fortune; evil and distorted or crooked, the contrary.

IX. A Cross or Star in the Merfa over Mons Lande.

shews fortunacy in travelling.

X. If there be no Menfa, it shews a cloudy and obfeure life and fortune.

## CHAP. XLIX.

Of the Thumb and Fingers.

I. A Line surrounding the Pollex or Thumb in the middle joint, shews the person shall be hanged.

II. A line paffing from the upper joint of the Pallex to the Cardiaca, shews a violent death, or danger by

means of some married woman.

III. Overthwart lines, clear and long underneath the nail and joint of the Thumb, thew Riches and Honour.

IV. Equal furrows drawn under the lower joint

thereof, shew Riches and Inheritances.

V. The first and second joint free from incilures,

shew a slothful and idle person. -

VI. Overthwart lines in the uppermost joint of the Index or fore-finger, shew inheritances; but such in the middle joint, shew a subtil person.

VII. Right lines running between those joints in the Index, shew (in Women) a plentiful issue; (in Men)

a nimble tongue.

VIII. If they be in the first joint near Mons souis, they shew a pleasant and consteous disposition; and a man of a generous soul.

IX. But

IX. But a Woman who hath a Star in the fame

place, is lascinious and wherish,

K. Lintle gridings in the joints of the Medius or middle finger an unfortunate and melancholy person: but equal and parallel lines shew fortune by dealing in Metals.

XI. A Star there, shews a violent death by drown-

ing or Witchcraft, or the like.

XII. A Gross line rising from the Mons Saturni, through the whole singer to the end thereof, shews a meer fool or mad person.

XIII. In the Annular or Ring-finger, a line rifing from the Mons Solis, straight through the joints there-

of, shews honour and glory.

XIV. In the first joint of the Annular, equal lines shew treasure and honour: overtheart lines, the hatred of Kings and great men; but if intersected, their envy shall be abased.

XV. In the Auricularis or little finger, a Star in its first joint near the mount thereof, shews one of inge-

nuity, and a good Orator.

XVI. Evil Characters and obtase Angles the contrary: those unfortunate signs in the first and second joints, shew a Thief: in the last joint, one perpetually inconstant.

XVII. Some Authors predict the number of Wives or Husbands, by the number of little lines in the outmost part of the Mons Mercurii; but in my opinion those things ought rather to be sought out in the Mount of Venus.

XVIII. And as in the Mounts good or evil Characters, are omens of good or evil Fortunes; so also on

the fingers they fignisse the same.

XXIX. The first joint near the Mount shews the first Age: the second joint, middle Age: and the safe Kk 3

joint, old Age: but it is our opinion, that the directions of the principal fignificators in every Geniture, more properly demonstrate the times in which the good or evil fignified by those marks or lines, may probably happen.

#### CHAP. L.

The Good and Evil Lines, Marks or Characters.

I. The good lines, marks or Characters are parallels, as = or || double or treble, and the like, Crosses as -- or x: double Crosses and the like: Stars as the Sextile Aspect \* or the like: Ladders-steps and Quadrangles as || or || : the trine Aspect as || : Angles as the right or acute, or a mult-angle, &c. the Characters of supplies and Venus, as 49, and other the like a-kin to these.

II. The Unfortunate and evil Characters are deformed, irregular and uncouth figures, broken lines, stocked lines, gridirons, the Characters of h Saturn and & Mars: the opposition &: irregular Circles, ob-

tufe Angles and fuch like.

II. Lastly, as the quantity of lines considered in their length and depth; their quality, in their shape and complexion; their Astion, in touching or cutting other lines; their passion, in being touched or cut of others; and their place in which they are posited or occated, ought to be observed; so also their time of appearing a discovering, ought not to pass our cognizance.

IV. For

IV. For it is most certain, that some lines are prolonged to certain years of our Age, othersome shortned; sometimes they wax pale, sometimes grow red; some of one shape quite vanish, while others of another shape rise: Now the cause without doubt is the various Progressions of the Aphetical places in the geniture, to their various and contingent promissors, to the instructe of which, the whole man it self is subjugated; and therefore it behoves the industrious and studious Artist, not to determine all things at first sight, for no man can attain the knowledge of all particulars at one inspection y Rut yearly to make new Observations, as the Person encreases in Age.

V. Moreover it is to be observed, that these judyments be not delivered simply alone, but by being compared with the rules delivered in Chap. 35. aforegoing, from whence many other Prognosticks more than what we have here mentioned will arise, to the infinite pleasure of the Artist, and sais-

faction of the curious Inquisitor;

#### CHAP. LI.

anich to get Meigres W. augs Na. word

Containing certain Chiromantical Aphorisms.

I. I Neisures and Crosses upon the Mount of Saturn shew some light Adversities and Diseases.

II. Two, three, or more little lines on the first joynt of the little Finger, shews the dominion of Mercury, and an acute wit.

I'I. The Mons Veneris notably furrowed, shews wantonness, and one that shall obtain many Loves.

IV. A large and broad Menfa, shews a free and liberal Soul: and if it be adorned with good Figures, an accumulation of much Treasures and Riches.

Kk 4 V. The

V. The Saturnia only toliching the Eparica, thews one ingenious, and of long Life.

VI. Mons fovis well adorned with good Figures,

demonstrates the height of Honour.

VII. A Cross near or upon the Farient, shews auti-

cious and profitable Journies, and honomable.

VIII. A Cross in the Mansa under the Annular, shews Honour, Glory, and Treasure: but if any of its lines be cut by the Epatica, it shews loss of substance in old Age.

IX. Two, three, or more parallel lines upon the Ferient, shews many profitable and pleasant Journies.

X. Two or three parallel lines upon the Moni Mercurii, enclines to all manner of Arts and Sciences, and

gives a profound wit.

XI. The Via Solis, not hurt, shews Honours, but if it be cut or touched by other lines, some impediment therein: If the obstructive line arises from the Mons Morcurii, by some Mercurial Man or thing or the like: If from the Mons Lana, from some Womankind, the common People, or some vulgar business; If from the Mons Sathmi, from some old man or men, some worn out Priest or Prophet, or Informer, or other Saturnian matter: the like judge, If it arises from other parts.

XII. Parallel tines upon the Mons Sammi falling upon, and cutting the Menfal line, shews Sickness,

Poverty, and want in old Age.

XIII. The cutting of the Vival, shews Diseases about those years, which the parts of the line cut sig-

nifie.

XIV. If the line cutting the Vital, comes from the Triangle of Mars, it shews wounds, or a burning Feaver, or the French Pox: If it comes from the Saturnia, it shews Melancholy, a Consumption, or a fall, &c.

XV. The

XV. The same Marin very confpicuous and eminene, shows boldedes and courage, and one that will be fortunate and formidable in War.

XVI. An exterior good Cophatien, flews anin-

comparable Ingenuity.

XVII. A Graf upon Mons Lanz declares fruitfullnels, and many Children; as also fale delivery in Child bearing.

AVAL. The Sararnia rising Obliquely from the Restricta, to the Mons Sararnis, shows labour and for-

row; and one of a covetous difformion.

XIX. A line wiling from the Middle of the hand, cutting the Epitica, and according to the Extremity of the Menow, under the Mono Mercurii, thews in the declining Age an unfaithful friend or friends, from whom that come loss and detriment.

XX. A Cross or Shar Near of upon the Epatica,

thews forme eminent good

XXI. As the Moni Saturni afflicted, foreshews diseases; so those diseases are chiefly the Gout or a Consumption: if the line afflicting the Mons Saturni, arises from the Triangle of Mars, it declares

either an Heetick or the Stone.

XXII. The Cingulant Veneris, generally shews intemperatice; but if it be interfected or cut, it is a positive figh of sensuality and Lasciviousness; and that the person shall suffer in Reputation and good name, and not without cause: and oftentimes foreshews want of Issue.

XXIII. The Triumple of Mars being perfect; the Saturnia extended only to the touching of the Eparicas, the Cophalica continued to the Mons Mercurinand the Via Lacton very fair, are firm Arguments of one ex-

ceeding fortunate.

XXIV. Parallel lines drawn from the Mounts of Saturn Saturn and Sol, to the Mons Lune, shews encrease of fortune and substance in foreign Countries, and intravelling, as also from some eminent Lady or Ladies, Womenkind, the Common people, and things Lunar.

XXV. The Mensal cutting the Mons sovis shews one passionate, and full of Wrath: if the same be cut under the Mons Saturni, by a short and thick line, it shews some grievous distemper in the bowels

and lower part of the belly.

XXVI. The Via lattea, arising from the Restricted and Vital, shews an old Age full of tranquillity; and so much the more, if the end thereof upon the Mons Lana be adorned with a Cross or Sear, or parallel line.

XXVII. The Eparica enclined towards the Refiritta (thereby making a narrow triangle) makes

one not over wile, yet Covetous.

XXVIII. A line coming from the Vital into the Triangulum Martis making a Cross with the Saturnia shews wounds and danger of life by Thieves and such like: the same Cross shews feavours also.

XXIX. The same is signified if the Mensal be con-

joyned with the Epatica by any intervening line.

XXX. A Cross or star on the upper part of the Mons Veneris shews Unlawfull loves and a lecher: this is the more Confirm'd if the said Mount be well adorned with surrows.

XXXI. A Sifter joyned unto the Saturnia, confirms

its fignifications double.

XXXII. The Cephalica extended even to the Mons Mercurii shews eloquence, a ready wit, and much ingenuity.

XXXIII. If the Via Solis appears not in the Hand, the favours of Princes and great Men will not be

eafily attained.

XXXIV. A

XXXIV. A line running from the Vital to the Mons Jovis (but especially passing through the Vital) shews greatness and honour, and that sometimes to come by Womenkind, or by Marriage.

XXXV. The Menfal projecting little branches towards the Ferient under the Tuberculum Mercurii pre-

fages poverty.

XXXVI. A line falling from the intervalls of the Mons Saturni & Jovis threatens 2 dangerous wound,

in the lower part of the belly.

XXXVII. The Vital diffected by a line from the Mons Saturni, shews a dangerous Saturnian difease: from the Mons Jovis, a difease of his nature: from the Mons Solis, a solar difease: from the Mons Mercurif one Whimsical, or afflicted with a Mercurial diftemper: from the Triangulum Martis a Martial difease, as some wound or burning feavour: from the Mons Luna, Madness, dropsy, or some other Lunar difaffection.

XXXVIII. The Menfal or Line of Fortune, cut by a line from the Mons Jovis, shews loss or damages by things or persons Jovial: by a line from the Mons Saturni or Linea Saturnia by things or persons Saturnine: by a line from the Mons Mercurii, by Scriveners, Pettysoggers, and things or persons Mercurial.

XXXIX. A line running from the Mons Saturni to the Mons Luna, parallel to the Vital, shews Wonderfull preferment and dignities; and a person formidable; but not without great envy.

XL. The Soror Martis, running through the Vital to the Mons Jovis, shews the d or other Aspect of

4 and 3 in the Geniture.

XLI. The Restrict a not broken or cut, but continued, and of a good colour, argues Riches, and a healthfull constitution of Body.

XLII. The

XIII. The Cephallea having a Sifter, confirms the fignifications thereof, let them be what they will: and if the faid Sifter reaches to the Eparica, it shows one crafty and subtil, and excellent in managing of Affairs.

XLIII. Good lines upon the Mons Solis being cut,

shews Honours, but full of troubles.

XLIV. Parallet incifures on the Mons Luna, tending to the place of Mars, thew long Journles.

XLV. The Epasica extreamly produced, argues a

very long Life.

XLVI. A Cross in the utmost part of the Mensa near the Forient, and another in the Cephalica near the Restricts, denotes a plentiful Life in old Age, and many successful Journes.

XLVII. A Cross in the Cavea Martis shews an inclination to Arms and Martial Discipline, and

formetimes wounds.

XLVIII. The Saturnia whole, and extended through the Epatica and Menfal, shews a happy successand event of Actions; and one of profound Cogitations.

Mens Veneris (not cut by any evil line) presages a

great fortune by Marriage.

L. A Cross just above the Referita between the Mons Veneris and the Mons Lune, shews tranquillity and happiness in old Age.

LI. The Mensal full of branches (almost like a Herring bone) and they pointing towards the Mons sovis, eminently declare an increase of Riches.

LII. The Character of & Jupiter in the Menfa under Mons Solis, thews preferment Ecclefiaftical,

LIII. Parallel lines in Triangulum Martis, pointing towards the Ferient, argue felicity and much good.

LIV. A

LIV. A Cross or Star, upon the end of the Saturnia near the Restricta, shews uprightness of mind, one courteous and peaceable, and obtaining a happy and pleasant old Age.

LV. A line from the Vital, falling upon, and cutting the Epatica, shews shortness of Life, and an

hot Liver.

LVI. The Saturnia falling from the Mons Saturni to the Mons Luna, shews advertities and secret Enemies, and if it then turns back like a hook towards the Mons Mercurii, it signifies Captivity or Impriforment.

LVII. The Cingulum Veneris cut by lines from the Mons Saturni or Mons Solis, denotes Diseases, and

hurts by Lasciviousness.

LVIII. The Via Solis cut by the Cingulum Veneris, brings a stain upon the Honour by some woman

kind.

LIX. Parallel lines from the Mons Veneris to the Mons Mercurii, shews a Conjunction or other aspect of Venus and Mercury in the Geniture, and fignific great Eloquence.

LX. A crooked line falling from the Mons Saturni into the Cavea Martis, threatens a fall from an high place, or drowning; and this fo much the more eminently as the line is more crooked.

Qui in manu omnium hominum signa posuit, ut cognoscerent opera ejus singuli. Job 37.7.

Libri quinti Finis.

Charge - Character Ashirlan en til mengingstill satt ellerness av i i Linnar som in til strendskørtel av i en skip e and a substitute of the court of the grafia in Nord and in the spatial in the first of a state of the state to a contract of the lates of All Tables and the second second and faile given the large bank and the . . . Mary Stranger Commencer

# POLYGRAPHICES

# LIBER SEXTUS.

Containing the 112 Arcanums of Peter John Faber, a most Eminent and Learned Physician.

Translated out of Latin into English, by William Salmon Professor of Physick.

#### CHAP. I.

The highest Tincture of Sol, fixed, for Luna.

Ake of Gold and Venus of each equal parts, melt them together in a strong Crucible, then beat them into thin Plates, and cement them together with a part of the following Cement.

II. Take Antimony and Cinnabar A. 3ij. Lapis Hæmatitis, common Vitriol calcined red, common Salt prepared, A 3 j. Bole Armoniack 3 B. German

Azure

Azure stone 3 st. reduce all into a fine Powder, which strew upon the aforesaid Plates (in a strong Crucible)

Stratum Super Stratum,

III. Cement them together with a fire of reverberation for twelve hours; then take out the Crucible, and melt the metal within it: show much of the Venus is carried away in fumes, you may know by weighing it.

IV. Repeat the work again with new Venus extracted from the Mine, by melting them, beating them into Plates, and cementing again with the aforefaid Powder for other twelve hours, with a re-

verberatory Fire.

V. Continue the Repetition for twelve times, always adding new Venus; so shall you have at last a most rubicand Gold, one part of which being put upon twelve parts of fixed Luna, shall transmute it into most fine Sol; and by this is Gold multiplied.

#### CHAP. IL.

The manner of fixing Luna.

I. Take of the best Luna calcined with Mercury, as much as you pleased reduce it into fine Powder, and mix it with an equal quantity of the (a) Cinnabar of Antimony.

II. Sublime, and in every Sublimation, renew the Cinnabar for three times: what remains in the bottom after the third Sublimation, diffolve in this

following Aqua fortis.

III. Take Niter and Vitriol A. 15 j. Antimony and Verdigrife A. 3 iij. mix them, and make an Aqua fortis according to Art.

IV. In

Chap. 3. The Fixed Tintiure for Venus. 513

IV. In the prescribed A. F. dissolve the above prepared Luna; hastening the dissolution in warm Ashes for three days; after the third day draw off the Aqua fortis by distillation.

V. That which remains in the bottom, reduce into a body with Borax, so is it fixed and tinged, and after a wonderful manner will embrace the above

prepared Tincture of Gold.

VI. And this is the way by the help of which the Tincture of Venus is drawn out of the body of Venus, and is transmitted fixed into the body of Sol, and out of Sol again into fixed Luna.

(a) Some suppose, that for want thereof, you may use Hungarian Cinnabar.

# A P. III.

The White fixed Tineture for Venus.

I.R. A Ercury fublimate the street of the most pure and limpid Oil of Tartar the. Borax the ji. dissolve the Borax in distilled Vinegar a sufficient quantity, filtrate the dissolution, which being clear and limpid, joyn with the former Oil of Tartar, then mix with them the Mercury sublimate in fine Powder, and let it be dissolved in warmashes.

I'. Upon that which will not be dissolved, put new Oil of Tartar conjoyned as before, with the

dissolution of Borax.

umildur :

III. Then diffill the diffolution in after; and upon what remains in the bottom, put new Oil of Tartar and Borax as before, till the Mercury shall

become in the bottom of the Alembick like wax, slowing with a very genule hear, and congealing

with cold

IV. Project one part of this Oyl of Mercury, upon ten parts of Nielted Venus, and it will be all Good Silver: And so the fixed Oyl of Mercury tinges Venus both within and without, that the Tincture remains for ever.

## CHAP. IV.

#### The Fixed Oyl of Mercury

I. R. M Ercury fublimate, and Sal-Armoniack Ana, as much as you please; sublime them both together four times, or till there shall remain in the bottom of the sublimatory, a great quantity of susible Mercury, and in the neck of the Retort the Sal-Armoniack.

II. Break the Retort, reduce the Mercury into powder, which dissolve in (4) distilled Vinegar: Eiltrate the solution, and distill the Vinegar: what remains in the bottom dissolve again in field distilled

Vinegar.

III. At length dissolve it in Common distilled water, which solution do so often, till the Mercury is converted into a pure Oyl, which is able to dissolve all things; but most powerfully Gold and Silver.

IV. And Gold and Silver, diffolved in this Oyl of Mercury, and cocted or digested till they are converted into a fixed Oyl, or fixed Salt, will make a wonderfull projection upon Venus, yea upon Crude Mercury.

V. The reason is, because that this Oyl or Salt be-

Chap. 5. The Red Cinnaber of Antimony. 515 ing (b) fixed, converts the same Metals into fine Sil-

VI. If this Salt be made Volatile, and then fixed

again, it will be a more powerful Arcanum.

(a) There is intended Spirit of Vinegar. (b) The oyl or Salt is not fixed, but is fo called in respect of the end or intention which is to fix; for no fixed thing can fix a volatile thing, for fixity demonstrates nothing but deadness, and no dead thing can invade anothers property: this is apparent to be intended, by the very proposition following thefe words.

#### CHAP. V.

#### The Red Cinnaber of Antimony.

TAke of the best Antimony and Mercury fub-I limate, Ana: diffill them by a Recort: and to the matter remaining in the retort, add new

Mercury fublimate, and diffill again as before.

II. At length, force the matter with a strong fire, so will the Cinapper of Antimony be sublimed in the Neck of the Recort; which for three days is to be continually sublimed in the Retort, till it is very red.

III. But the Liquor which distills from the Mercury fublimate and Antimony, highly rectify by distilla-

ons till it emits no fæces.

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IV. To this put Mercury feven times fublimed, and by various and many reiterated distillations it will be fixed; which you will the more easily obtain, if you add the former (a) described oyl conjoyned with Luna, and fix them together by reiterated Cohobations.

V. Thus have you the Oyl of Mercury, and Antimony, which is admirable to transmite Jupiter into Luna, by puting one part upon ten parts of molted Jupiter.

(a) That oyl is intended at Sect. 4. Chap. 4. aforegoing.

## CHAP. VI.

A fixed Tineture to project upon Venus.

I. Take fixed oyl of Tartar, (as we shall hereafter teach) Sulphur Vive, A. 3ii: mix them, and make a past, which put into a Retort, and distil, so have you a Red liquor.

II. This liquor put with crude Mercury into a Glass Retort, draw it off again by distillation, and the Mercury will be fixed at bottom of the Retort.

III. You may project with this fixed Mercury upon Venus fused in a Crucible ) one part upon five parts of Venus) but it will not be able to make a transmutation, except that the fixed Tartar be conjoyned with Luna in a fixed oyl.

IV. The reason is, because there is no fixed tincture can be made to tinge, without the perfect metall's converted into an Oyl or fixed Salt from whence is made a fixed Oyl by a constant and through boyling.

ed slow if a conflicted business, we are bressed.

It ministes your second of the strong relia C HAP.

I we be quencied bedigned to small our black of a few parts of the second of the

# page back HAP. WILL have

the white of The Fixing of Oyl of Tartar.

I. Take Tarrar Calcined to whiteness, dissolved it in common water, filter and make it very

pure. II. Then in a Glass Urinal, over a gentle heat in Sand, evaporate the humidity, till a skin or fuch

like appears to cover it on the top to 1197

III. That figur appearing put in a little fair common water; and boylit again, till a skin appears on the superficies or top of invoince nov

IV. Put again to it a little common fair water, and boyl it again, till you fee a skin again appear to

cover it.

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V. Put again more water, and boyl it again, till a skin covers it again. This do fo many times and fo long till no more skin will appearto cover it, for then it is fixed, and will remain or indure fusion in the I TARke Roman Vitriol calcined to Reduct diffire.

# and make very clear evanous of decare, and con-

or in diffilled Vinegar with it are,

To fix the Orl of Sal-Armoniather don't Il

I. Armoniack, extracted by diffillation Alexander Alexan mon water 36 mix and incorporate them together: put them into a ftrong Chicible, which cover? and lute very well, putting it in a comenting fire for four hours, then taking it out at bill and the sail and

II. Diffolye the matter in common warm water,

and make it boil for an hour, then filter, and make the liquor very clear.

III. This Liquor evaporate, and congeal the Salt, which then mix together with the white of

an Egg.

IV. Put this into a moist place to dissolve into ovl. most gloriously fixed; to which compay an Equal Quantity of Mercury feven times fublimed. by cohobating it upon the matter which will not fubling, till they are both brought into a fixed oyL

V. One part of this Oyl put upon melted Venus F. XU. tinges it admirably white, which whiteness

will remain for ever.

VI. But if you conjoyn this oyl with Oleum Lung, it will be much more noble and perir again, till you feed sking m

## CHAP IX

### A wonderfull Red Tind we extracted from Vitrial.

I. Ake Roman Vitriol calcined to Redness, diffolve it in distilled Vinegar with filtrate, and make very clear, evaporate, deliccate, and congelate it, and reduce it into a very subtill pouder.

II. Imbue it till it grows moift with water of Sal-Armoniack, extracted by distillation, and dry it

with a gentle fire.

III. Impibe it again with water of Sal-Armoniack, drying it as before this do to many times, till it has sunk up to much of the water of Sal-Armoniack, as the vittiol it felf did weigh.

IV. Put

Chap.9. Of Red Tincture from Vitriol. 319

IV. Par the matter to imbibled in a large Gials matters well stopped, which place in a hot bath for fifteen days, or in Horse dung which keeps more the equality of the feat.

V. Then take the Vitriol out of the Marres, and put it into a well luted Retort, from which distill with a gentle fire, to dryness, or so long till no

more will come forth

VI. After Augment the force of the fire gradually, till the force comes forth, and continue it in the fame degree, till all the foirits are come over.

VII. Let the fire be yet augmented, till the Retort grows red and is perfectly hot, fo will the Vitriol be

rubified.

VIII. That you shall join with the matter found sublimed in the neck of the Retort, by beating them together: which mix with their own water contained in the Recipient, by imbibling, beating, and drying so long till all the water is insused, and imbibed into the said Vitriol.

IX. And the fublimation is to be iterated, joyning the Volatile matter with the fixed; fo will there

be a matter fixed, and very red as blood.

X. This you must reduce into powder; put it lifto a strong Glass Phal, which close well; bury it in a cold and most place for fifteen days or more, till it is dissolved into a most red water which filter and make very clear.

XI. Project this upon Mercury seven times fall limed, so will it be rubified, and converted into a

red ovl.

XII. This Oyl conjoyn with an equal quantity of the Oyl of Gold, which you shall fix together in a Retort by abstracting the humidity with a gentle fire, so have you a perfect medicine.

L14 KIII. One

XIII. One part of this medicine being put upon a Thousand parts of Crude Mercury, warmed in a Crucible; or upon a thousand parts of Luna, or of any other Imperfect metall, it will convert them into the most pure Gold.

#### CHAP. X.

#### To make the aforesaid Oyl of Gold.

I. Ake of Sol as much as you please, dissolve it in Royal Aqua fortis wherein Sal-Armo-

niack or common Salt is diffolved.

II. Keep warm the diffolution for fifteen days, then abstract the A, F by distillation Cohobating the distilled water many times upon the matter remaining in the bottom of the Stillatory.

- It. Renew the A. E. three times till the Sol remains converted in the bottom of the Veffel into

a red Ovissi si ca si maren

. O ....

. IV. Dissolve a quantity of this Oyl in Aqua ardenti deflegmated, and let them be conjoyned.

Spirit of Wine, and the Oyl of Sol will remain in the bottom of the Veffel.

VI. This Oyl conjoyne with the aforefaid (a) fublimated Mercury, so have you indeed a perfect medicine.

(a) At Sect. 10. and 11. of Chap. 9. aforegoing. where the parter thing evelope, to O sin'T all

street of of Gold, which you to that to where thing sales and area of section CHAP

#### CHAP. XI.

To make an increase of Gold and Silver.

I. Ake of the best foliated Sol 3i: of thebest Mercury 3iii; mix them together, and make an Amalgama.

IL Then take of Common Salt decripitated, as much in weight as is all your Amalgama, which mix

together by beating.

naof

1-

III. Put them into a Glass Retort in Ashes, and distill with a very strong fire, so will the Mercury ascend, and be separated from the Gold, which will remain in the bottom of the Vessel.

IV. The Gold wash with common fair water so

long till it has no tast of the Salt

V. Then take it out and melt it alone, and you shall find your ounce of Gold to be increased a whole drachm (viz. for your žvii) you will have žix.

VI. This Gold if you cement with the Cement described in (a) our first Arcanum, and then again Amalgamate it with the former Mercury you shall multiply the Gold more and more, even till all (b) the Mercury is transmuted into Gold.

VII. And by many times cementing the Gold and Amalgamating it with Mercury, and mixing it with decripitated Salt, as is aforefaid in this Arcanum, you will have a very high and large Augmentation.

(a) See Chap. 1. Sect. 2. (b) Till a great part of it is trans-

#### CHAPXI

A Fixed Tinhane for Venus.

TAke filings of Venus fbi; of the best Mercury washed this; beat them with Vario in a Marble Morter, till they are Amaleumated tozether.

II. This Amalgama beat, and by many Lotions make it parely white, to which add Sal-Arthoniack thi white Arlenick Evi: white Tartar ii. common

Sale decrepicated 31.

III. Beat all together, and imbibe the powder with distilled Vinegar, till the mass becomes of the

body and thickness of Honey.

IV. Put it into a Retort, and diffill to drynels, or as much as you can make come over; and what fablimes, put upon the faces, and mix them by bestring or grinding.

V. This mixture imbibe with new distilled Vinegar (a) fo long till nothing will afcend, but all remains

fixed in the bottom.

VI. This fixed matter beat, and mix it with the Whites of Eggs.dry it with a gentle heat, and put It into a pot ( not of Glass or glased) with a fit cover well luted to it, and calcine it in a strong fire, for one whole day.

VII. Then dissolve the matter in (b) Mineral distilled Vinegar, filtrate and make it very clear; then evaporate the Vinegar by distillation to dry-

ness.

VIII. Diffolve it again, filter and clarifie, which four

four times repeat, till your fixed matter remains in the bottom of the Alembick, like running Oil.

IX. One part of this, conjoyned and melted with as much of the best Luna, is sufficient to be put upon

thirty parts of purged Copper.

X. And if the matter be oftentimes diffolved in Mineral distilled Vinegar, and as often coagulated and dissolved again, at length one part will be enough to cast upon an hundred parts of purified Copper.

(2) Distilling again to dryness, and imbibing and distilling. (b) This mineral Vinegar englit to be extracted with Niter, for then alone is makes the Solutions and Coagulations.

#### CHAP. XIII.

The Purgation of Venus for the former Tineture.

I. T Ake an hundred whites of Eggs, beat them together with a flick, till they are converted

into a water.

II. In this water put hot (a) Eggshells to the quantity of the Crude Tartar the put them into a glass Vessel, stop it close, and digest it in warm Horse-dung for eight days; then distill a water therefrom by a retort.

III. In this water quench fused and melted Copper three or four times; so will it be prepared and

purged to receive the former Fincture.

(2) The word the Author uses is Calens, but in what sense is somewhat difficult to be understood; if the thing be intends, be only dryness, doubtless they only ought to be made

made hot or warm: but if incineration, they ought to be

#### CHAP. XIV.

#### To congeal or harden Mercury.

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I. Take of Mercury thus prepared as much as you please. Let the Mercury boil in the inice of Limons for fix hours; their boil it again for fix hours in the juice of Bears Breech; and then for other fix hours in common Oil and Vinegar mixt together in equal quantity.

II. The Mercury thus prepared, put into a strong Glass Matres well luted with this following Lute.

III. R. Calx viva well beaten, Tantar well beaten, and common Salt A. q. s. (a) make a Paste with whites of Eggs, of which make Lute; and with which let the Matress, wherein is the prepared Mercury, be luted according to art.

IV. Let the Matress have a very narrow mouth, which close very well with a glass Stopple, and the

aforefaid Lute (1)

V. Then put it into a gentle Fire in affect for three hours, afterwards increase the Fire, and continue the same degree of hear for another day.

VI. This done, break the Glass, and you shall

find the Mercury transmuted into good Luna.

(a) You may fee the way of making feveral other good Lutes fit for this purpose in our Pharmacopoeia Londiners lib. 6. c. 5. Sect. 3, 5, 10. (b) If the neck be narrow enough, you may give it the Hermetick Lute at Sect. 14. of the aforecited place.

CHAP.

### 1X. And Minoreover this matter be ver diffulted as Minor or noted Vinctor, and then coagalized, in A OVER CHAP. XV.

#### With the Regulus of Antimony to make Gold.

I. Ake Regulus of pure Andmony, fine Gold and Silver, of each equal parts, melt and make them run in a Crucible, fo have you a friable or brittle matter like Glass.

II. Beat and powder it, and make an Amalgama with 3iij. thereof with (a) the Mercury of Antimony 3 ix. which thut up in a Matress well closed.

III. Put it upon a gentle fire for a month; but in fuch a fire, as in a month may inspissate it, and make

it grow black.

IV. In the second month increase the fire, or bury the Matress again more deeply in ashes; but so increase the fire, or bury it so much the more deeply, as that the matter may grow up into a mineral Tree.

V. Continue this degree for a month; at length for eight days augment the fire, till the matter is

melted.

VI. This matter amalgamate again with new common Mercury well washed; and boil it again for three months, as before, augmenting the fire.

VII. Thus have you the matter of the projection, one part of which, being put upon ten parts of Luna,

transmutes it into fine Gold.

VIII This matter, if it be throughly and perfectly depurated by Sublimation, and then fixed fo as to be a powder, fusible like Wax or Butter, you have the Powder of projection to be put upon all Metais, one part upon a thousand of any impure Metals."

IX. And

IX. And if moreover this matter be yet diffolved in Mineral distilled Vinegar, and then coagulated, it adds much more to the perfection of the work.

X. And if it be often dissolved in common water distilled, and congulated, so that the marter be made (a) sweet, it works perfectly, and cures all Discases, both in Mankind and Metals.

XI. These Solutions being very often iterated or repeated, with fair common water, it will be con-

verted into a sweet red Oil.

(a) That is meant sweet, as being freed from the Salts or correstor Acidity of the Spirits of the mineral Vinegar.

#### CHAP. XVI.

For the making of Sol.

I. Take Niter, Verdigrise, Sulphur vive, Roman Vitriol, A. Itas. Sal Armoniack Jyv. Cinnabar Jij. reduce them into a fine Powder and mix them.

II. Put them into a Luted Retort, and distil therefrom an Aqua fortis, observing the degrees of fire.

HI. In this A. F. diffolve of the best Sol 3 j. Then in another Matrels, diffolve a part, of the best Mercury well washed 3 iv.

IV. Conjoyn the Diffolutions, and with a gentle fire separate the Aqua fortis, cohobating (the water drawn off) thrice, upon the matter remaining in the Retort.

V. And put common water often diffilled (when the aforefaid A.F. is separated)upon the faces, which dissolve. Chap. 17. For the whitning of Copper.

diffolve, filter, and clarifie; this often iterate, feparating the A.F. which at last will all come forth.

VI. Then put upon the matter the first water which is sweet, that at length it may sweeten the matter remaining in the bottom of the Stillatory, and convert it to a sweet and fixed Qil.

VII. One part of this Oil, put upon twenty parts of (a) Saturn or Luna, will convert it into Gold.

(a) Ton must propare your Saturn or you will do nuthing.

#### CHAP. XVII.

For the whitning of Copper.

I. R. Common Sale calcined 3 B. Quicklime 3 B. Arfenick calcined 3 J. Tarter calcined 3 B. fixed Sal Armoniack, Borax A. 3 ij. Mercury fublimed (a) feven times as much, mix, and make of all a Powder.

II. Calcine it (b) for an hour, then diffelve it in (b) distilled Vinegar, filter, and evaporate the diffe-

lution.

III. Calcine it again a little, and diffolve again in distilled Vinegar; this work so often repeat, till you have a Salt susible as Wax, and an incombustible Oil.

IV. One part of this put upon p. x. of (d) purged Copper aforementioned, converts it into good Silver: this is the best whitning of Copper.

(a) I suppose there is intended 3 xjy. (b) You must calcine it very gently, last poulos your labour. (c) Where-soever

forver you meet wish distilled Vinegar, always understand the Spirit thereof or that from which the slegm is abstracted. (d) The way is taught in Chap. 13, aforegoing.

#### CHAP. XVIII.

The Cementation of Sol.

I. TAke Roman Vitriol 3ij. Sal Armoniack 3j. Verdigrise 3 B. Crocus Martis, Niter, A. 3j. mix and make a Powder, which sublime till it will sublime no more.

II. Then diffolve it in putrified Urine, filter, clarifie, and evaporate the Solution; that which remains

at bottom, is the fecret Cement.

III. Take (a) Luna and Gold of each 3j. melt them together, and let the Mass be beaten into (b) thin leaves, which cement with its equal weight of the foregoing Powder, and the whole Mass will be transmuted into fine Gold.

CHAP.

<sup>(</sup>a) You must take cupellated or fine Luna. (b) I suppose very small fileings, made with a very fine File, may do the work nearly as well.

#### CHAP. XIX.

#### Oil of Sulphur Vive.

I. Take of Tartar calcined to j. Sulphur Vive to s. beat them into Powder, and put it into a Retort, closing it well, which keep so for two days;

without distillation.

II. That time being past, distill by ashes with a strong fire, so shall you have a wonderful Oil, which certainly cures the Falling-sickness, if about gut. x. be taken for some days together in a Morning sasting (a).

III. So also Mercury prepared, as we have before declared in this Chapter, cures the Falling-sickness,

being given (b) in gr. x.

IV. And if it be cast upon throughly melted Venus; it perfectly whitens it.

(2, b) In a convenient Vehiculum, as Essence of Peony, Wine of Black Cherries, or some such like Liquor.

#### CHAP. XX.

A Tincture for Sol.

I. Take of Sol 3i: of Luna 3s: of the best Mercury washed sij: make an Amalgama, which put into a Glass body well closed.

M. m. II. Set

II. Set it in a gentle heat for 20. or 30. days, till the Amalgama is converted into a red powder.

III. Joyn this with new Mercury, and boyl (or digeft) again till it is fixed, which work repeat four times, and dissolve it in the following Aquafortis.

IV. Take Roman Vitriol, filings of Mars, Sulphur vive, Niter, common Salt, A. ibif. from all which prepare a water by diffillation, which will be very red.

V. In this water diffolve the afore faid matter,

prepared from Gold, Silver, and Quick Silver.

VI. Then abstract the Aqua fortis, and cohobate oftentimes till the water comes forth white.

Dissolve again in Mercurial Vinegar distilled;

filter, clarify, and abstract the Vinegar.

VIII. After that diffolve the matter again in common water distilled; then filter, clarify and abstract the Water till the matter remains in the bottom of the Vessel, converted into a running oyl, or susple Salt.

IX. Cast P. i. of this Oyl or Salt upon Crude Mercury made pretty hot p. 100.; and the whole will be converted into good Gold.

#### CHAP. XXI.

The Extraction of Mercury from Antimony.

I. TAke Antimony šviii, powder it finely, and put it into a Capacious Matress, upon which put the best Aqua Vitæ ibii: Salt of Tartar švi: Sal-Armoniack šiii: mix them well together in the same Matress:

Chap.22. An Elixir for the Golden Work. 531 Matrefs: stop it up close, and putrefy in warm horse dung for fifteen days.

II. Then take it forth, and circulate it (being

yet close stopt ) eight Days.

III. After, boyl it for two days, and you will find the Mercury in the bottom running and Volatile: Out of every Eight pound of Antimony, you will have running Volatile Mercury 3v.

IV. This is the best Mercury for the performance of the preparation of that Arcanum at Chap. 15.

aforegoing.

#### CHAP. XXII.

#### An Elixir for the Golden Works

I. Sublime Mercury seven times with common Salt prepared, and at last sublime the same five or seven times with Sal Armoniack, till the Mercury remain at the bottom susible as Wax.

II. This Mercury diffolve in mineral diffilled Vinegar; filter the Solution, And coagulate, by diffil-

ling from thence the Vinegar.

III. Dissolve the Mercury in the Vinegar, which repeat three or four times till the Mercury will melt

as Wax.

IV. This Mercury thus prepared, dissolve in pure distilled rain Water, then coagulate, which do many times; and at length dissolve it in the humidity of the Air.

V. To this clear and limpid Solution add the Calx of Sol (prepared with Mercury and common Salt) which dissolve alone into a most rubicund Li-

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VI This Liquor by many Solutions and Coagulations, convert into a fixed Oyl and a pure Elixir.

VII. Being cast upon a thousand parts of fine Luna, it will transmute it into the purest and best Gold.

#### CHAP. XXIII.

Of Drawing forth the Virgins Milk.

I. T Ake Mercury feven times sublimed this. Disfolve it in this following water.

II. Take May dew fix times distilled; common Aqua fortis seven times distilled A. they, mix them together and distill by a Retort two or three times; so have you a very sharp Vinegar.

III. In this you must dissolve your afore said seven times sublimed Mercury; which Dissolution putrefy

for a month in warm Horfe-dung.

IV. Then distill, and always conjoyn the water which distills over, with that part of the Mercury which remains at the bottom, till all the Mercury ascends by distillation; which will quickly be done if the Artist be a wife searcher out of Nature.

V. For the water of May dew must be augmented when the dry water ascends from the Mercury

remaining in the bottom.

VI. Which Mercury is so often to be dissolved in the distilled water of May Dew, till at length

it all ascends Acid.

VI. This is that which is called Lac Virgineum or Virgins Milk, and the most sharp distilled Vinegar (a) fitted for the Dissolution of all Metalick bodies.

Chap. 24. For the whitning of Copper.

533

bodies, converting them into a fulible Salt, and

a fixed Incombustible Oyl.

VIII. By the help hereof all Our Arcanums are most perfectly compleated, without it nothing true can be found; from whence it comes to pass that this Vinegar is used in the making and perfecting of every Secret.

(a) This is that Mercurial Vinegar mentioned Chap. 20. Sect. 7. aforegoing.

#### CHAP. XXIV.

#### For the Whitning of Copper.

I. Take of the best Luna as much as you please, melt it in a Crucible, and cast upon it an equal quantity of the whitest Arsenick broken into little bits.

I'. Cast it into a reed, or in the form of an Ingot,

and it will be brittle as Glass.

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III. Then beat it to powder, and mix it with an equall quantity of Mercury seven times sublimed: sublime again till the Mercury is fixed with the Luna in the bottom of the Vessel.

IV. If this be not quickly done, conjoyn your Luna so prepared with suffible Mercury so made (a) with Sal-Armoniack as is above said, so will your

matter be perfectly fixed.

V. This matter dissolve in our (b) Virgins Milk, which solutions being several times repeated, it will be converted into a susple Salt, and a fixed Oyl.

VI. This is to be sweetned from its acrimony by distilled water iterated with many cohobations, to

will it be a most perfect Oyl.

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VII. One part of it put upon a thousand parts of melted Copper, it gives it an Eternal tincture; which will always remain, yea in the fite it felf.

(a) According as is taught in Chap. 4, and Chap. 22. (b) The making of which you may see at large Chap. 23, aforegoing.

#### CHAP. XXV.

A secret from Antimony and Mercury.

I. Take Mercury seven times sublimed with Vitriol and common Salt, (the Vitriol calcined to redness, being changed every time, and the common Salt diminished, being dissolved, descated, and made pure) that there by, vie. by the sublimation thereof, the Mercury may extract the Tincture of the Vitriol and Salt.

II. Take of this Mercury feven times sublimed ib; Mineral Antimony, or Antimony as it comes from the Mine, as much; reduce all into a fine

powder, and mix them together.

III. Put them into a Retort, and digest in warm Horse-dung for 25. days, or a month; which done,

IV Place the Retort in a furnace in Ashes & distill with a very gentle fire for 12. Hours, then increase the Fire, till a red Oyl comes, after which, put out the Fire, and cool the Vessels.

V. Take out the Oyl, and put it into a Retort close stopped, which place in a very good hear for 8

Days

VI. After that distill in Balneo Mariae fix times, and a feventh time in hot Ashes, till it is very pure and

Chap. 26. A Tincture of Silver upon Copper. 535

and clear, limpid, and shining as Gold.

VII. In this Liquor diffolve Gold-calcined with Mercury and Salt, or let it be converted into a fixed Oyl, and then conjoyn it with its equal weight of Gold, boyling them together till they are fixed.

VIII. Or diffill the Volatile part, which cohobate To often upon the fixed remaining in the bottom of

the Veffel, till the whole is fixed.

IX. One part of this fixed Oyl, tinges an hundred

parts of Luna, and turns it into pure Gold.

X. Also leaves of Silver heat red hot, and extinguished in this Oyl, are transmuted into fine Gold.

XI. And it fixes Crude Mercury into Gold, if some few drops there of be projected upon it in a

hot Crucible (a).

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XII. Its Vertues and power are multiplied if it be often dissolved ( in the faid water extracted from Antimony and Mercury seventimes sublimed) repeating the distillations and putrefactions.

(a) In this case it will be much the better way first to fix the Mercury by the fumes of Lead, in fuch fort that it may endure melting the better, left it otherwise should all fly amay, before the operation is performed.

#### CHAP. XXVI.

A Tincture of Silver upon Copper.

'Ake of Luna (Amalgamated with Mercury) 3ii. of g extracted with Calx vive and Tartar from Mercury fublimate, 3iij.

II. Let the Mercury be well washed with Salt and Vinegaty to which addSalt often purged till it flow like

M m 4

wax, which is done by many Solutions, Calcinations, and fulions.

HI.Mix all in a fixatorie vessel, which for a Month

put upon Warm Aihes, till the whole is fixed.

IV. To this add Mercury sublimate (fixed by many Sublimations with Sal-Armoniack) thrice the weight, and fix again; boyl it for a month, and it will be perfectly fixed.

V. This you must repeat four times, or till the

water flows like wax with out fume.

VI: Then project of this matter p. j. upon Venus p. x. and it will be tinged perfectly into Silver.

#### CHAP. XXVII.

#### A Tincture of Gold upon Luna:

I. Take of fine Luna 3ii: of fine Sol 3i: melt them together, and bring them into thin Le ves, which diffolve in Aqua fortis.

II. To this diffolution add Mercury feven times

fublimed 3ii; then distill to dryness.

II. To this matter add fixed Mercury and fluid or fufible, prepared with Sal-Armoniack as above said; which again diffolve, and abstract the Aqua fortis to dryness, which repeat by thrice cohobating, till the matter flows like wax without fume.

IV. Project of this p. j. upon fine Luna p. x. and it

will be good Gold.

#### CHAP. XXVIII.

Another Tincture of Gold upon Luna.

I. T Ake of fine Sol calcined with Mercury, Sulphur, and common Salt prepared and well purified: wash the Calx in warm water, till it is sweet, and freed from all manner of saltness.

II. Take of this Calx \$11; Mercury feven times fublimed, and reduced again into running Mercury

3ij: mix them well.

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III. Then put them into a fixatory or strong Matrefs well stopt, which place in an Athanor for a month, that the matter may be congealed.

IV. Diffolve again with the fame Mercury prepared in the fame manner as aforefaid, by beating

and mixing till the matter will flow as wax.

V. Then diffolve it in our Virgins Milk, or our diffilled Vinegar, which we have declared above, in

the three and twentieth Chapter.

VI. The diffolution filter till it is clear, which is many times to be dryed, and to be diffolved again by many cohobations; which is fo often to be iterated till the matter will flow as wax, without any fume.

VII. Then edulcorate it with Spirit of May dew, that it may lofe all its acritude; fo have you a true

Elixir, to project upon Luna.

VIII. One part hereof put upon a thousand parts of melted Luna, will transmute it into the best and finest Gold: which will be more pure, if with patience it is elaborated. It is a long preparation.

#### CHAP. XXIX.

A Tindure of Sulphur and Mars for Luna.

Ake fcales of Iron (plenty of which you may find in a Smiths shop ) being beaten off from the red hot Iron, thi: yellow Sulphur as much.

II. Mix and burn them together, adding new Sulphur 3i. or ii. for the fecond or third Combustion.

III. Being burnt, beat it, put it into a Recort, and diffill by ashes, observing the degrees of fire, so have you an Oyl of Sulphur in a large quantity; because the Sulphur of the Iron is adjoyned to the common Sulphur, by which the humidity is augmented.

IV. The distillation being done, augment the fire, till the matter remaining in the bottom of the Retort

is red hot, and well calcined to Redness.

V. This matter thus calcined Red, take, and put upon it its own water in a Glass Vesselte which add Spirit of Life (a) four times as much as there was of the Oyl or sharp water, distilled from the Sulphur and Mars.

VI. Put these in warm Ashes that they may boyl gently, and extracta Tincture by boyling from the

Calcined matter.

VII. This Tincture decant by Inclination, and add new Spirit of Life, putting them into a gentle heat to digest till it is Coloured.

VIII. This tincture decant, and conjoynit with the former, which work to often repeat, till the Spirit of Life will be no longer tinged.

IX. Put these Tinctures of the Spirit of Life into a Stillatory, Chap. 30 A Tineture from Sulphur Vive, &c. 539

Stillatory, and with a very gentle Fire separate the Spirit from the tincture which will remain in the bottom of the Vessel thick like honey.

X. To this Tincture add of Mercury well washed an equal quantity, mix their throughly, which digest in a gentle heat for one day, till the Mercury is fixed into a red powder.

XI. This red powder diffolie in our Virgins milk, and cohobate often till it is converted into a red Oyl

fixed.

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XII. This Oyl conjoyn with an equal quantity of the Oyl of Gold, and digest in an equal and gentle heat for a month, and it will perfectly fix the Oyl of Mars, Sulphur and Mercury.

XIII. This being put one part upon melred Luna

an hundred parts, gives a wonderful Tincture.

(a) There is meant Spirit of Wine; yet some think Spirit of Mercury; others Spirit of Quick lime, but they are deceived.

#### CHAP. XXX.

A Tincture from Sulphur Vive, and Argent Vive, upon Luna.

I. Take of Sulphur Vive, or that which was never yet melted, but is as it was taken out of the Mine, (for that has the better and greater Tincture.)

II. Take of this Sulphur fbij. reduce it into Pouder, and put it into a strong capacious Glass Urinal; upon which put Spirit of Wine perfectly deflegmated, mated, so much as may cover it the breadth of five

or fix Fingers.

III. Place it in warm ashes, that it may gently boil, taking off the scum which arises, with a Spoon, and casting it away; this boiling continue for three days and nights; adding new Spirit of Wine, as the former wastes.

IV. At the end of three days the Sulphur will be fulible and incombustible, which dry with a continued gentle heat, till the Spirit of Wine is totally

vanished.

V. This fixed Sulphur mix well with its equal quantity of Mercury (well washed) in a glass Mortar with a glass Vessel, till they are throughly mingled.

VI. Then put it into a strong glass Matres, with Spirit of Wine covering it the breadth of four Fingers, which stop very close, and place in warm Horse dung for insteen days, and the Spirit of Wine will be descated, the matter remaining dry.

VII. Take the Matrels from out the Horse dung, and place it in warm ashes, so will the matter turn black as pitch in a few days: and continuing this gentle heat, it will pass through all colours, till it comes to

a perfect redness, like that of a Ruby.

VIII. This matter fix in a fixatory in an Athanor for a month, till its odour or finell is most fragrant and fweet, which you may perceive by the aperture of the Vessel.

IX. If this matter be diffolved in our (a) Virgins Milk, and then again in Spirit of May Dew, till it is fweet; it will more perfectly make a transmutation into Gold.

X. One part of it being put upon a thousand parts of melted Luna, or upon any other Metal, it transmutes them into the finest Gold.

XI. Yea,

Chap. 31. Of Arlenick to whiten Venus. 541

XI. Yea, being put upon Crude Mercury (b) in a hot Crucible, it transmutes it into a stone of the same virtue and Efficacy.

XII. One part of this Mercury being put upon an hundred parts of Quickfilver, fixes it into good

Gold.

(a) The way of making it is taught in Chap, 23. aforegoing. (b) You may first fix it with the summes of Lead.

#### CHAP. XXXI.

A Preparation of Arsenick to whiten Venus.

I. Take Sal Niver, Roch Alum, common Salt prepared, A. ibj. mix and make an Aqua fortis according to art.

II. The Feces beat well, and put to them Crystaline Arsenick in fine Powder to j. which sublime once.

III. Beat this sublimate small, and dissolve it in

the aforesaid A. F. and clarifie the Solution.

IV. Distil this dissolved Arsenick by a Retort, and you will have in the bottom a dry matter, which in a moist place will resolve into Oil.

V. To this Oil add the Oil of Luna (the preparation of which we have taught before) and fix them

together for a month in a warm place.

VI. Then abstract the superfluous humidity by Distillation, till there remains in the bottom of the Stil-

latory, a truly fixed Oil.

VII. This Oil will penetrate Copper and tinge it white; and one part of it being put upon one hundred parts of melted Copper, will transmute it into good Silver.

CHAP.

#### CHAP XXXII.

#### A fixed Tincture to convert Luna into Sol.

TAke of the best Luna calcined with Mercury and Salt prepared: mix it with an equal quantity of Cinnabar of Antimony; these sublime three times.

II. In every Sublimation repeat the Cinnabar of

Antimony.

III. Then dissolve this matter in a Compound Agua fortis, made of Niter and Vitriol, A. to i. Antimony, Verdigrise A. 3 iij. make the Solution over warm afhes.

IV. Keep the diffolution warm for three days; at the end of which time, distil a water, and reduce the Fæces into a body, by melting or diffolying them

with Borax.

V. Thus have you a Tincture for Luna, which with an equal quantity of fine Sol, will transmute it into good Gold.

#### CHAP. XXXIII.

#### Mercury Water.

I. Ake Mercury sublimate in fine Powder 16 i. lay it in a ftrong substantial plate of Tin, with ahole in its middle: place it on a glass Funnel in a cold place, that the Mercury may melt per deliquium.

II. This

It This Liquor distil in Balneo, repeat the diftillations, until the whole matter be turned into

water, and doth all arise in the distillation.

III. Take all this diffilled water, and draw it off in after: what remains in the bottom of the Alembick, her it melt again per deliquiem, and diffil again in Balneo and after as before, till no faces remain in the bottom of the Alembick.

IV. In this Mercarial water feven times distilled in ashes is Gold (caloined with Mercary, Salt and

Sulphur) to be diffolved.

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V. This Solution is to be putrefied for fifteen days in horse dung, and distilled with a gentle fire in ashes, and cohobated upon the Faces, till it be converted into a true fixt Oil, whose virtue is wonderful.

VI. One pound thereof, will go upon an hundred of melted Silver, and turn it into pure Gold, tinging

and transmuting of it throughly.

VII. If its Oil be sweetned with Spirit of May Dew, by often diffolying, distilling, and cohobating, its virtue and efficacy to encreaseth, that it cores all Diseases both Humane and Metallick.

#### CHAP. XXXIV.

To tinge Luna into Sol.

I. Take of the best Sol calcined, Crocus Maris, calcined Brass, of each a like: add thereto Sal Armoniack, rectified upon Crocus Martis, by Solution of the Sal Armoniack in sharp Spirit of Vinegar; for the Crocus being so dissolved, tingeth the Sal Armoniack with its colour.

II. By

II. By distillation or Exfectation and sublimation, let this Tincture be joyned to the Sal-Armoniack.

III Diffolve of this Sal-Armoniack 4 ounces, in our Vinegar; our Virgins Milk (a), and put into this Solution the powder of the Crocus, of Gold, and of calcined Brais, in which perfectly diffolve them all.

IV. Filter and purify the Solution, and let it putrefy for a month in Horfe-dung, then diftill by a Retort

in a Gentle Fire, or Ash or Sand heat.

V. Cohobate the Matter on the faces, till it be converted into a fulible Salt, which fweeten with Spirit of May dew, and then it will tinge very well: one part will go upon ten parts of melted Silver, and transmute it into good Gold.

(a) See Chap. 23. aforegoing.

#### CHAP. XXXV.

To make Crocus Martis more noble, for perfecting the former secret.

I. Take as many filings of Steel as you please, wash them ten or 20 times in water, in which Salt is disfolved, till the filings are very clear and pure, then dry them.

II. Put them into a Glass Matrels, and affuse thereon strong Spirit of Vinegar, to which add a good

quantity of diffolved Sal-Armoniack.

III. Place the Glass Matress in the Sun for 8 days, turning it every day, and shaking it: then decant the Vinegar, and put on fresh Spirit, with new Sal-Armoniack.

IV Shake well the Matress or Vessell, and put it

Chap. 36. To turn water into good Wine. 545 to the Sun again, until the Vinegar is tinged, which decant also, and add it to the former.

V. This work you must repeat, till the filings are dissolved in the Spirit of Vinegar and impregnated

with the Sal-Armoniack.

VI. Diffill these Tinctures with a gentle heat, so will the Spirit come off, and leave the Crocus at bottom, most admirable in augmenting the Tincture in the former Chapter.

VII. This Crocus may be reduced into a true red Oyl of Mars and if it be often diffolved in Spirit of Vinegar, and then diffolved in Spirit of May dew, it

will be turned into a most red Oyl.

VIII. This Oyl if it be joyned with the Oyl of Gold and fixed, it will be a most perfect work, of which one part will go upon an hundred parts of melted Silver.

IX. Mercury feven times sublimed, will be tinged by it, and converted into a most red Oyl, nearly equal in Virtue and power, to the former Oyl of Gold.

#### CHAP. XXXVI.

To turn water into good Wise.

I. T Ake of the best wine six quarts or what quantity you please; distill it in a Glass Alembick large and high with a gentle Fire: Or substitute good Spirit of Wine (seven times at least rectified) in its place, that it may be persectly dephlegmated.

II. The Spirit thus rectified keep well stope in a Glass, then prosecute your distillation, and the slegm will come over, which rectify seven times, till it

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be very pure and clear, and free from all manner of

faces in the distillation.

III. The flegm thus prepared keep in a Glass by it felf; increase the fire, in the same distillation, and you will have a red and fortid Oyl: this you must so often rectify till it be white and clear, and has lost its empyreuma, which keep in a Vial well stopt.

IV. Calcine the remaining faces in a Crucible, with a strong open fire, till they are white, to which Calcin'd faces put the rectifyed flegm, in a new Glass Alembick, with a blind head: let it boyl for an hour,

then filter and purify it.

V. This purified liquor diffill in an Alembick; and the faces remaining calcine again as before, and diffolve it in the flegm: thus do 7. or 10. times, Calcining, diffolving, and filtering, till you have a pure white Salt, freed from all faces and impurity.

VI. To this pure Salt add its own rectified Spirit, referved after the seventh rectification, and in it dissolve the Salt in a warm Sand heat: filter and purify the Solution: and if there remains any thing un-

dissolved, calcine it again.

VII. Being Calcined, diffolve it in the rectified flegm, then Coagulate, and diffolve it in the rectified Spirit; which Solution diffill and cohobate fo long upon the remaining Salt, till it be turned into an Oyl, which purify, and make volatile, by joyning it with its own Spirit.

VIII. This by continual digettion fix: being fixed add to it the former rectified Oyl and fix both toge-

ther, then volatilize and fix it again.

IX. Thus are all the Elements of the Wine joyned in this fixed mixture; and it will turn Water into good and pure Wine: One pint will turn 300 pints of water into Wine, which is wonderfull to fee.

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#### CHAP. XXXVII.

To turn the fusible Oyl of the Golden Marthasite into Gold.

I. Take of the best Marchasite of Gold stij: re duce it into very fine impalpable powder, which dissolve in Aqua Regis, upon warm Ashes.

II. Decant off the clear part of the Solution, from the turbid fæces; diftill the Solution clear, dry the fæces, and cohobate the diftilled water upon the fæces; always purifying the Solution, and decanting it clear off from the troubled fæces.

III At length dry the marchafite, and add to it of good Gold (calcined with Mercury, Salt, and Sulphut) one ounce: and of the Sal-Armoniack rubified (with the Crocus Martis, as above) 2 drachms: of Mercury 7 times fublimed 3 drachms.

IV. Mix and incorporate all together in a Marble Mortar with a Glass Pestell: and put all into a Retort, and distill with a gentle Ash hear, till all the humidity is vanished.

V. Then increase the fire that the Volatile pairs may sublime into the neck of the Retort; after which break the Retort; and joyn the matter beaten into powder in the bottom with what sublimed into the neck.

VI. Mix them very well together, and fublime them again: repeat this work feven times, the matter will be (as fufible as wax) in the bottom of the Retort.

VII. Joyn this fusible matter, with the fixt Oyl of the Alcaly, or fixt Salt: digest them for a month N n 2

in an Athanor in a strong Glass: and if need require, digest it longer untill it be congealed into a fusible yet fixt matter.

VIII. you may project with this by putting one ounce thereof upon an hundred ounces of Mercury

made hot in a Crucible.

#### CHAP. XXXVIII.

To make the Oyl of an Alcali to prepare the former secret.

I. T Ake Sal Alcali 10. pounds: beat it in a Marble Mortar, and incorporate it with distilled Vinegar. of which make round balls, and dry them in the Sun.

II. Put these balls into a Reverberatory, and calcine them for 24 hours: then dissolve them in a sufficient quantity of distilled Vinegar; filter the

Solution, and distill to dryness.

III. Then dissolve it again in fresh distilled Vinegar, the matter is turned into a fixt oyland Salt, susible as year.

#### CHAP. XXXIX.

To tinge Luna into Sol.

I. Ake of the best Antimony well pondred one pound: crude Tartar and Salt, of each as much: pouder them all, and being well mixed, calcine them in a Strong Crucible, with a violent fire.

II. Encrease the fire till the matter is melted; and

Chap. 40. To make the Mercury of Antimony. 549 let it remain melted for four hours, that the Regulus

may fall to the bottom of the Crucib e.

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III. When the matter is cold, Separate it from the Regulus, which keep: the rest of the matter dissolve in fair water by boyling it; then filter and purify it as as much as you can.

IV. This matter thus filtered and purified, mix with the spirit of Vinegar, so will the Golden Sul-

phur of the Antimony precipitate.

V. This separate by filtration, so will the Golden Sulphur remain in the filtering paper, which dry by a gentle Fire.

VI. The dryed Sulphur diffolve in our Virgins

Milk, and digest it till it be tinged.

VII. Then distill the Solution, and the acid part of the distillation cohobate upon the fæces, that they

may be diffolved again and purified.

VIII. Repeat this work to often, untill it be turned into a red fixt oyl, which is to be joyned with the oyl of Gold, and digested untill it is fixed into a full-ble and tinging Salt.

IX. One ounce of this Salt will transmute an hun-

dred ounces of melted Luna into good Sol.

#### CHAP. XL.

To make the Mercury of Antimony.

I. Take of the Regulus mentioned in the former chapter 4 ounces: of Sal-Armoniack, well depurated by Solution and dryed, 8 ounces.

II. Powder and mix them all together, and fub-

lime them in a strong Glass.

N n 3 III. Repeat

III. Repeat the Sublimation 5. or fix times, till the Regulus does rife with the Sal-Armoniack.

IV. Then dissolve all in common fair water, warmed, and impregnated with the Salt of Tartar; so in the bottom of the Vessel you will find the Regulus turned into a running Mercury after Menstrual digestion. See chap. 21. aforegoing

#### CHAP. XLI.

To extract Mercury from Metalls reduced into a Calx.

I D Issolve in common Aqua fortis Salt calcined by degrees, until the Aqua fortis will dis-

folve no more.

II. Into this water put Regulus of Antimony, if you defire its Mercury; or the Calx of Lead, Tin, Iron, Copper, Silver or Gold, if you defire their running Mercury.

III. Stop the Glass well wherein the Solution of the Metallick Calx is made: digest it for a month in Horse-dung, and then distill off the Aqua fortis and

dry the matter.

VI. Repeat this work again, digeft, diffill, and dry; and add to it its own weight of Sal-Armeniack, and as much of Tartar, upon a good quantity of Aqua ardens or Spirit of Wine.

V. Digest this mixture for 15. days, then cause it to boyl; and you will find running Mercury in the

pottem.

#### CHAP. XLII.

To transmute Antimony into Sol.

I. Take Mercury of the Regulus of Antimony 3 ounces: of the best Gold filed or made into thin leaves, one drachm: make an Amalgama thereof.

II. Then with common Mercury and pure fine Silver, make another Amalgama, beat and mix both the Amalgama's in a Glass Mortar, with a Glass

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III. Being well mixed, put them into a long bolt head well stopt, and in a gentle heat digest the matter, untill it wax black.

IV. Then increase the fire, and digest untill it grows white: digest still, and increase your Fire,

till the matter wax red as Cinnaber.

V. To this add new Mercury drawn from the Regulus of Antimony or Silver, mix them well together, and digest them again, till the matter waxes white, and red as before.

VI. This do three times, and you will have a true Elixir for Sol: one ounce whereof, will go upon

a thousand ounces of melted Luna.

VII. And if this matter be diffolved in the Mercurial water we have taught to prepare in the 33. Chapter aforegoing, it will be an unparallell'd fecret; and being fweetned with Spirit of May-dew; it cures all difeales, both humane and Metallick.

Nn4 CHAP.

#### CHAP. XLIII.

To make Mercury of Silver, and with it a great Elixir

I. Take of the best Silver 2. ounces: dissolve it in Aqua fortis, and digest it for a month, then distill and cohobate 3. or 4 times.

II. At length draw off the Aqua fortis to a fourth part, and place the rest in a cold moist place to cry-

stallize.

III. To these Crystalls well dryed, add of good Oyl of Tartar made of the best and whitest Salt of Tartar fix ounces: of dissolved Sal-Armoniack two ounces: digest them in Horse-dung for a month, or in Balneo, in a Glass Matress very well stopt.

IV. Then add to it sublimed Sal-Armoniack, and

Salt of Tartar, of each equal in Weight.

V. Digest it with Spirit of Wine for 15. days, and then let it boyl, and in the bottom you will find a running Mercury, which dry, and wash with Salt and Vinegar, and again dry it.

VI. This Mercury amalgamate with Gold and Silver, and digest the Amalgama, that it may be turn-

ed into a red powder.

VII. Then nourish it with the like Mercury, digest it that it may be fixed, & again dissolve it: this do 7 times, and fix it till it be converted into a red powder.

VIII. One ounce of this powder, will make a projection upon an hundred ounces of melted Luna, and

turn it into good Sol.

IX. And if this powder be diffolved in the water of Mercury, and digested into a fixed Oyl; one ounce will project upon a thousand ounces of melted

Luna: it will also project upon all other Metals, but chiefly upon Tin, and Lead.

#### CHAP. XLIV.

To fix and tinge Venus into good Luna.

I. Take of Mercury 7 times sublimed vi. ounces;
Sal-Armoniack, as much: Calx of Lunz calcined with Mercury two ounces: mix all together and sublime them.

II. What sublimes, add to the faces, beat them together, and again sublime in a new Glass: which work repeat till nothing sublime, but all remains at

the bottom of the Glass.

III. Then pouder it, and in a moist place, let it run per deliquium; which liquor filter, purify, and con-

geal upon warm Ashes.

IV. Dissolve it again with the water which afcends, filter and congeal upon Ashes, which work repeat 7 times, and it will be a medicine; of which 1. ounce will change 50. ounces of Mercury into Luna; & tinge an hundred ounces of Venus into good Luna.

#### CHAP. XLV.

To fix Luna, and tinge it into good Sol.

I. Take Mercury feven times sublimed 3. ounces:
Gold calcin'd (with Mercury, Salt and Sulphur) one ounce: Oyl of Crocus Martis often dissolved, washt and purified 3. ounces: rubified Sal-Armoniack 4 ounces.

II, Mix

II. Mix them together, and sublime them with a strong Fire in a Glass Matress in Ashes: what sublimes, put again to the faces which remain in the bottom, and repeat this so often till it will sublime no more.

III. Then what is in the bottom beat and pouder very small: this powder put into a Glass with holes in it, over a glass Funnell, and in a moist place,

let it melt per deliquium to water.

IV. This Water, filter, purify, and distill it: what remains in the bottom, dissolve again in the Water that distilled over: and repeat this till the matter remains in the bottom, in a moist, red, and susple Salt.

V. One ounce of this cast upon an hundred ounces of Mercury warmed in a Crucible will transmute it into good Sol: and projected upon an hundred ounces of fine Luna, makes it all Gold of proof.

#### CHAP. XLVI.

To fix Mercury into fine Luna.

L Take of calcin'd Tin 4. ounces, dissolve it in a sufficient quantity of the Virgins Milk, (in Chap. 23. aforegoing.)

II. digest the Solution for 8. days in Warm Ashes,

that the Calx may be diffolved.

III. Diffolve the Calx of Silver (a) in the fame Virgins Milk, and digest it also for 8 days: at length joyn both these Solutions together, and distill them in Ashes.

IV. To the matter remaining in the bottom add four

Chap. 47. To fix Mercury into fine Sol. 558 four ounces of the Oyl of Sal Alcali (b) and diffill it,

and dry it.

V. Then joyn both the distillations together, viz. what is distilled from the Virgins Milk, and what came from the Oyl of Sal Alcaby or fixt Salt.

VI. In this Mixture dissolve the remaining matter in the bottom of the Glass, filter and purify it, and

again distill.

VII. Repeat this Solution, filtration, and distillaon, till the matter is turned into a fixt Oyl, or fusi-

ble Salt.

VIII. One ounce hereof will project upon an hundred ounces of crude Mercury made hot in a Crucible, and transmute it into fine Luna.

(a) i.e. Silver Leaves, but truly Calx of Silver. (b) See Chapter. 38, aforegoing.

#### CHAP. XLVII.

To fix Mercury into fine Sol.

I. Take of the best Minium vj. ounces: dissolve it in a good quantity of our Virgins Milk; and digest it for 8 days.

II. Add to it of the Crocus Martis or of its Oyl 4. ounces mix all together and putrefy it for viij days in

Horse-dung or in a Balneo Mariæ.

III. Then diftill to a dryness, and dissolve it again with its own water; filter and purify it: repeating this work, till the matter is converted into a red and fusible Salt.

IV. Add to this Salt, of the Oyl of Sol 2. drams mix and digest till they are fixt: then in their own

water

water diffolve the matter again: repeat this to often. till all be turned into a true and red fixt Ovl.

V. One ounce of this will fix and tinge a thousand ounces of Mercury, being made hot in a Crucible: it will also tinge Luna into fine Sol.

#### CHAP. XLVIII.

Ta fix Mercury into fine Sol.

Ake Crocus Martis 4 ounces of the best red Lead as much: diffolve all in a fufficient

quantity of our Virgins Milk.

II. Digest the Solution in a Balneo, i.e. a bath for fifteen days; filter and purify it, then diffill it to dryness in a Retort in Ashes: cohobate upon the fæces, dissolve, filter and purify again, and distill in a Retort to dryness; and do this till the Matter diffolve without any faces.

III. Then disfolve and distill, till the matter be turned into a fufible Salt: to this Salt add Gold (calcined with Mercury, Salt and Sulphur) well washed, 2 drachms: Ovl of Sal-Alcaly or fixt Salt 3.

ounces: mix and digeft for 15. days.

IV. Then draw off the superfluous moisture, and cohobate by diffolying, filtering and diffilling, fo long,

till your Salt is most pure, red, and fusible.

V. One ounce of this Salt will project upon, fix, and transmute a thousand ounces of Mercury into fine Sol.

### CHAP. XLIX.

To fix Mercury into fine Luna.

I. Take of the best white Lead and of the Calx of Silver (calcin'd with Mercury) of each 2. ounces: diffolve them in our Virgins Milk.

II. Filter the Solution, and digeth it in Balneo for 15. days; then add to the faces new Virgins Milk that all may be dissolved; for the Calk of the Silver is hard to dissolve, and will remain undissolved, if you be not careful.

III. You shall know when the Luna is dissolved; for then the fæces in the bottom of the Vessel will

feen foongie or light.

IV. After all is diffolved and made pure, diffill to drynes: then diffolve and purify the Solution again, till all the matter be numed into a fufible fine Salt; which will be done in 12. or 15. Solutions.

V. One owner of this fufible Salt may be projected upon a hundred owner of Mercury hear in a Crucible, and it will transmitte it into good Luna

#### CHAP. L.

To fix Mercury into true Sol.

I. T Ake the red mineral stone (a) heat it hot, and quench it in strong Vinegar (b), do so seven times.

II. Then beat and pouder it very fmall, and diffolve folve it in common Aqua fortis (c), putrefy the Solution 15 days in Horse-dung, or Balneo Maria.

III. Filter the clear part of the Solution from the faces, then diftill it, and cohobate upon what remains

in the Vessell ten times.

IV. Then diffolve in our Vinegar or Virgins Milk, filter and purify the Solution as before, and diftill it.

V. Then diffolve it in Oyl or twater of Mercury
(d): let it be diffolved, dryed (e) and diffilled, until

it be turned into a fixt Oyl, or fulible Salt.

VI. To this Salt add oyl of Sol as much, then fix it, which is done by a short digestion because the said Solar Oyl is fixed (f) of it self; therefore the fixation is done in a very little time after they are mixed together.

VII. This red Tincture is multiplyed, and its Vertue and power increased and one ounce of this Tincture will project upon a thousand ounces of

Mercury, and fix it into pure Sol.

(a) That is Cinnabar native or artificial, but rather native. (b) Here you are to understand Spirit of Vinegar, freed from all its slegm. (c) Understand the strongest Aqua fortis of the common kind, viz. that which is double. (d). See the preparation thereof in Chap. 33. aforegoing. (e) By drying here is meant coagulating. (f) Not that it is absolutly fixed in it self, for indeed it is most Volatile, but it is so called because it is of a sixing property, and sixes other things.

#### CHAP. LI.

To make the Oyls of Gold and Silver.

I. Take of the best Gold, (calcin'd with Salt, Sulphur, and Mercury, and then washed) two ounces: dissolve it in a sufficient quantity of

Aqua regia.

II. Digest it in Balmeo or Horse-dung for 15. days, and dissolve the Solution to the consumption of a third part: the rest take from the fire, and expose it to the cold Air, that the Gold may congeal (a) into yellow stones or Crystalls.

III. Put these stones upon a Glass, and let it run to water (b), the rest of the Solution again distill to the third part, then expose it to the Air to Crystalise, as before, and run per deliquium, and distill as before.

IV. Repeat this work to often, until the Crystalls or little yellow stones are turned into a fixed Oyl.

V. But by cohobating upon it Aqua fortis, it will be fooner turned into a fufible Salt, (c). And after this manner is the fixed Oyl of Luna prepared.

VI. These Oyls are very necessary for the perfecting of severals operations and are the principal things of note in Chymistry; for we need no other secret, but these Oyls of Gold and Silver.

VII. And although there are many other things which can do it, yet these very Oyls augment and multiply, and are of that Virtue, that they are true

ferments.

VIII. They turn all other fixed Oyls drawn from minerals or Metals into their own substances; and

so by the Oyls of Sol and Luna, the fixed Oyls of imperfect Metals are multiplied.

(a) That is, shoot into Golden Crystalls. (b) viz. to diffolve into a liquor per deliquium. (c) This is according to the mind of Paracelfus, who thinks that by continual affusion of more of the dissolvent you will at length divide the matter into so small and subtill particles that it will become Oyl. See my Doron Medicum, lib. 2 cap. 1. Sect. 16.9.185.

#### CHAP. LII.

#### To fix Luna into Sol.

I. TAke of dryed Roman Vitriol twelve ounces:
Antimony, and Sulphur, of each four ounces: Verdigrife, Sublimate, of each two ounces:
Sa! Nitre fever ounces; make of these a water according to Art.

II. Take one pound of this water, and add to it feven onnces of Crystalls of Arsenick, in a large Glass marress with a long neck, which circulate till

all be fixed.

III. Then dry it, and powder it: Take of this powder one pound, and calt it upon fix pounds of melted filver; and it will make it somewhat brittle.

IV. Toast this metall upon a Cupell, till it be sweet, and then dissolve in Aqua Regia, what will not dissolve, melt with Borax in a Crucible, and you will find half the Luna rurned into Sol.

# CHAP. LIL

To extract Mercury from Sols

I. Ake what quantity you please of Sol, calcined with Salt, Sulphur, and Mercury, and fewer times repeated by abstracting the Mercuryin a Retort, and adding fresh Mercury to the matter remaining in the bottom of the Glass, till the Sol is

reduced to a very fine powder.

II. Take of this prepared Goldtwo ounces: of the best white Salt of Tartar ( from which the best rectified Spirit of Wine has been distilled) four Junces: common Salt decrepitated, diffolved, and congealed again two ounces: Sal-Armoniack purely fublimed one ounce: the best rectified Sprit of Wine fix ounces: mix them all together of the

HL Put all into a Glass Wessel, stopt well, and putrefy it in Horfe-dung, or Balneo, for a month.

IV. Then diftill off the Spirit of Wine, and if any Quickfilver remain at bottom, diffolve it in Agua fortis; then draw off the Agua fortis, and cohobate it three or four times. ( believed to bedie

V. At last put to it the best rectified Spirit of Wine, and make it to boyl, so shall you find the Mercury alone in the bottom of the Vessel, which purify very well, and keep it for perfecting of the

following Arcanum.

#### CHAP. LIV.

To fix this Mercury into most fine Sol.

I. TAke of the fore mentioned Mercury (of (s) Sol ) one ounce: of common Mercury drawn from Ginnabar, with Lime and Salt of Tartar, 20. ounces simix all together, and put to it of the best ov! drachms which mix well together in a firong Glassi

IL Digeft them for a month in Ashes, till the mat-

ter is turned into a fixed red powder nev a or best best

IIL Distolve this powder in our Virgins Milk (a). the bredaration of which we have formerly taught. filter and purify the Solution / To brigg beiling

IV. Digest this in Horse-dung for a month : thendraw offthe Virgins Milk, and keep or referve it for

other feetets.

V. The remaining matter diffolve again in Spirit of May-dew, filter, and purify the Solution, and abfractit again by a gentle or flow diffillation. Visitil

VL This work repeat to often, till you have a Salt fusible as wax or butter: of which one dance will transmitted thousand ounces of common Mercury ( well washed or cleansed ) into pure Sol Devis

(a) See Chapter 23. afore-going.

# CHAP. LV. TARRY A VIEW VILLE

To fix the Mercury of Luna into Luna.

TAke of Mercury drawn from Luna two drachms: common Mercury, drawn from common fablimate two ounces and an half or twenty drachms:

Chape 56. To cement Luita into true Sol. 463
drachms: Oyl of Luna two drachms: Oyl of Tin

H. Put them into a ffrong Glass mattress, and boyl in an Ash hear, till the matter is fixed into a

powder, or white Salt.

. III. This powder or Salt diffolve in our Virgins Milk; filter and purify the Solution: then distill off the Milk, and cohobate it several times, till all the matter be converted into a Salt, suffile as wax.

IV. Diffolve this fulible Salt in Spirit of Maj-Dew, and dulcifie it by cohobation: follow do this, till the Salt be turned into a true and white fixed

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V. One part of this oyl, will transmute a thoufand parts of common Mercury into pure and fine Luna, and for ever fix it.

## TOTAL Solution TO HAP. LVI.

#### DO SIL To coment Luna into true Sol.

I. TAke of burnt brass j. drachm: Roman Vitriol made red, and of the best Crocus Martis, of each two drachms: Lapis Tutia, Sal-Armoniack, of each j. drachm: make them into a most subtil powder, and mix them together.

H. Take then of the finest Sol, and of the finest Luna, of each equal parts, melt them together, and make thin plates thereof, which cement with the

former powder in a Crucible.

III. Lay them in the Crucible, firstum super fratum with the powder, which cover and well lund it, and cement for twenty four hours.

IV. Then wash the Plates, and melt them again,

and make plates, and cement as before with the fame powder: this do seven times, and all the Luna will be turned into the most pure Sol.

#### CHAP. LVII.

To make Aurum Potabile to prolong life.

I. Take of the most pure and fine Sol, what you please, dissolve it in Aqua regia in which prepared common Salt is dissolved, and putterly the Solution in Horse-dung for a month.

II. Then add thereto half a pound of reclified Spirit of Wine, digest in Balneo for fifteen days,

and abstract the Spirit of Wine.

III. The Sol again diffolve, and cohobate feven

times upon the matter remaining in the bottom.

IV. Now here is to be noted in this Solution, that the Aqua fortis (a) which is first put on the Gold to dissolve it, is to be seven times rectified in new Retorts, that it may be freed from the Salt.

V. The Sol being thus diffolved is then to be put into Spirit of May Dew, and so diffolved: abstract the Spirit, and diffolve again, and abstract to dry-

ness.

VI. This dry matter expose to a cold and moist Air for a night, that it may be dissolved, and the acrimony of the Aqua fortis (b) be fully taken away.

VII. Diffolve again de novo with new rectified. Spirit of Wine, and dry it by diffillation; which work seven times repeat, till all the Sol is turned into a sweet Oyl.

VIII. This is Arrum Potabile, which will cure all diseases and Infirmities, and prolong life to extream

old

Chap. 58. To make Argentum, &c. 965 old Age. Dose one grain or drop in a spoonful of good Spirit of Wine (c).

(a.b.) In both these places you are to understand Aqua Regia; (c) not rectified, for then it will be too strong to be taken: instead thereof you may use pure Canary, or, which is better, choice Cinnamon water.

#### CHAP. LVIII.

To make Argentum Potabile, to cure all diseases of the brain.

I. Take of fine Silver what quantity you please, dissolve it in a sufficient quantity of common (a) Aqua fortis.

II. Putrefie the folution in Horse-dung for a month, or in Balneo Mariæ; then distill the matter to drynes, and cohobate upon the fæces seven times.

III. Diffolve the matter again in Our Virgins milk; purify the folution by filtration, and putrefy again in Horfe-dung for fifteen days.

IV. Abstract then the Lac Virgineum, and cohobate

upon that which remains in the bottom.

V. Then diffolve with a fufficient quantity of the best Spirit of Wine: putrefy the solution in warm Horse-dung or Balneo Mariæ for eight days; abstract the Spirit and cohobate seven times; and if the solution be not clear, filter it.

VI. This done, abstract the Spirit of Wine, and dissolve in Spirit of May Dew; filter the solution, and abstract so many times, till the matter is conver-

ted into a fufible Salt, and fweet.

VII. And to make it fweeter, you may dissolve

it in new fresh rectified Spirit, three or four times, so will you have a pure sweet oyl of Luna or Argentum Patabile, for the cure of all diseases which affect

the brain.

VIII. It is very certain, that if all the Oyls of Sol and Luna (before prepared) were often diffolved in the best rectified Spirit of Wine, and duscified with Spirit of May Dew, and so freed from the Spirit of the Aqua fortis, they might with more safety and pleasantness be taken into the body for the curing of diseases.

IX. Neither is their Virtue and property of transfmuting metalls into Sol and Luna, thereby weakned,

but rather fortified and extended.

X. But fee that you operate warily and skilfully, for there is what can be defired in Chymical preparations, if you can but obtain these Metallick Oyls, for the curing of diseases in men and metalls, as experience can testify.

XI. Yea the bodys of Vegetables may be cured by these Oyls, perfectly dulcified, for all bodies, Animal, Vegetable, and Mineral have one and the

same fountain of Life.

XII. And out of the same fountain, may be preferved, and brought to their utmost perfection, that can be, which few understand or believe.

(a) Without doubt you ought to take the best Aqua fortis,

#### CHAP. LIX.

To transmate Luna into Sol.

I. Take a pound of the best Aqua faris distill it from the Sal-Armoniack, and common Salt prepared, of each three ounces: which repeat seven times.

II. Diffolve in this Royal water of the most fine Gold two ounces: and of Mercury amalgamated

with fuch Gold four ounces.

III. Digest or boy them in a strong Glass Mattress in warm Ashes for a month, till the whole matter is converted into a red powder.

IV. This powder diffolve in the aforefald water; and digeft it in a warm Balnes Maria for a month.

V. Then distill to dryness; cohobate seven times, by putting what is distilled upon that which remains dry at bottom.

VI. Add to the distilled water Spirit of May Dew, in which dissolve the matter, purify and filter the solution; this repeat many times, till the matter is con-

verted into a fusible Salt.

VII. This Salt dulcify with the Spirit of May Dew, repeating it with fresh Spirit of May Dew, until the Salt be sweet, and retains no acrimony.

VIII. One part of this will project upon a thoufand parts of Melted Silver: and if you continue diffolving it in Spirit of Mey Dew, its Virtue will be thereby more and more augmented.

#### CHAP. LX.

#### To transmute Venus into Luna.

L Ake Mercury drawn from fablimate with Lime and Tartar eight drachms: of the best leaf Silver iii. drachms: mix and make an Amalgama.

II. Digest this amalgama in a Mattress well closed in warm Ashes for a month, till it is converted into

a powder, or grows into a tree.

III. Let this Mercurial and Lunar tree be dissolved in common Aqua fortis made of Vitriol, Salt peter, and Alum.

IV. Digest this Solution in Balneo for a month, then abstract and distill to dryness; and cohobate

feven times with the distilled water.

V. Then digest the matter with the most strong Spirit of Vinegar, filtering and purifying the Solution; which putrefy in warm Horse-dung for fifteen days.

VI. Then abstract by distillation; and dissolve what remains at the bottom with Spirit of May

Dew, feven times rectified.

VII. This work to often repeat, till the matter

is converted into a Salt fulible and fixed.

VIII. Project one part of this Salt upon a thoufand parts of Venus, and it will all be converted

into most pure Luna.

1X. Let this Luna, made fusible, be oftentimes difforved in a cold and moist Air, and then congealed, that its Virtue thereby may be multiplied; so thereby you may prepare a Silver Mine, for the transmutation of Venus.

X. From

X. From this Mine, you may take every month, or every week half its weight to project on Cop-

per.

XI. But let there be added to the remaining matter Mercury fublimed, or Crude; and so the Silver Mine or matter, will never decay; as will be manifest by the following Arcanum. The same may be done with Sol.

#### CHAP. LXL

A Perpetual Silver Mine, that will never decay

I. Take of the Silver and Mercury in the former Chapter, one pound: to which add of the Mercury drawn from Cinnabar, with Lime and

Salt of Tartar by distillation, half a pound.

II. Mix, and beat all together in a Glass Mortar with a Glass Pestil: then put it into a Mattress with a long neck, which close well; and digest it in warm Ashes for a month; in which time it will be all fixed and converted into one substance with the former.

III. Then take half a pound thereof, and cast it upon an hundred pounds of purified Copper melted,

and it will all be pure Luna.

IV. Now that this Mine may not decay; put half a pound of prepared Mercury or common Mercury well washt to the aforesaid Mine in a Glass Mattress; and boyl or digest it for a month (close stopt) in warm Ashes; so will the whole Medicine be ofequall Virtue with the first.

V. And by this manner of feeding it with Mercuty, your Mine will last for ever; so that every month

you may take out half a pound, for the transhuration of Venus into good Luna.

VI. In the same manner may you likewise proceed with Sol, as shall be declared in thysollowing Arca-

Mine or matter, will never decay

nam.

#### CHAP. LXII.

Aperpetual Golden Mine, to transmute Luna into Sol.

I. Take of the Sol, prepared by some of the former secrets; or at least, Sol that is by Art converted into a fixt Oyl or Salt which is susible: Take of this susible Salt of Gold a pound: of Mercury, drawn from Cinnabar as is before taught, half a pound.

II. Mix, and beat all together in a Glass Mortar, with a Glass Pellil; and put it into a strong Glass Mattress, with a long neck, which stop or close

well.

III. Put this Mattress to digest in warm Ashes for a month, and in that time all the Mercury will be converted into a Medicine, of equal Virtue with the former.

IV. Take of this medicine one part; and cast it upon a thousand parts of melted Luna, and it will

all be turned into good Sol.

V. To the remaining matter, add half a pound of Mercury prepared ( at Japra) and digest it for a month; so will you find, that your Golden Mine will be inexhaustible. Thus by the pure Oyls of Sol and Luna, are made the Golden and Silver Mines.

#### CHAP. LXIII.

#### A tinging Water to tinge Luna.

I. T Ake of burnt brass (prepared, and diffolved in common (a) Aqua fortis, and deficcated by abstraction of the Aqua fortis) half a pound: of the Tincture of Mars, or of Crocus Martis, diffolved into oyl, half a pound: Roman vitriol calcined only to whiteness, one pound: crude Antimony, Sulphur, and Mercury sublimate, of each iii, drachms: Verdigrise, Lapis Tutia of each two drachms: powder them all and mix them.

II. Put them all into a Glass Retort well luted, and from hence draw an Aqua fortis, and therewith

oftentimes imbibe this matter.

III. Then calcine it in a Crucible with common Salt, and common Mercury; or else dissolve your Luna in a Glass Alembick, and abstract the Aqua fortis by distillation; what remains in the bottom will be tinged Luna.

IV. This tinged Luna may with Borax be redused into a body, throughly tinged with the highest

Golden Colour.

V. The fæces of this Aqua fortis are very profitable to cement Luna with equal parts of Sol, to tinge it into a Golden Colour; they being mixt in equal quantities, made into Plates, and cemented with the faid powder for 24 hours, in a well luted Crucible according to Art.

<sup>(</sup>a) That is made by the common Recipe, but you ought to take the best of that kind, viz., double Aqua fortis.

CHAP.

#### CHAP. LXIV.

Lib. VI.

#### To multiply Luna.

Ake of the best Mercury, well washed, two drachms: kill it with common Salt, and Mans spittle, by strongly Grinding of it in a Glass Mortar with a Glass pestil.

II. Being thus mortified or kill'd, put it into a Crucible, and upon it powder of Crystalline Arsenick half a drachm: Tartar calcin'd to whiteness with

Salt peter, as much.

III. You must have ready another Crucible, in the bottom of which let plates of Copper be made fast, that they may not fall down when it is joyned

with the lower Crucible.

IV. Joyn both the Crucibles together, viz. that with the Mercury, Arfenick and Tartar, to that with the Copper, letting that with the Copper be upper most, and lute them well together, that nothing

may perspire.

V. Then put them into a Reverberating fire for four hours: for the first hour let the fire be soft and gentle; for the second stronger; for the third approaching to the highest degree: and for the last hour, cover all over the Crucible with live or burning Coals, and make the fire very strong for that hour.

VI. Then let the fire go out, and the Crucibles cool: being cooled, take forth the matter in the upper Crucible, adhering to the Copper Plates, which

keep.

VII. Take pure fine filver one drachm, melt it, and

and put to it by degrees the Mercury found in the former superiour Crucible, and upon it crude Tartar, till you see the matter clear and splendid, so will your Silver be augmented to the one half.

#### CHAP. LXV.

#### To tinge Luna into Sol.

I. Take of the red oyl of Antimony, and of the red oyl of Mars, of each three drachms: distill them together till they be purely clear and red.

II. To this add the Oyl of Sol four drachms: mix them together, and boyl or digest till they are all fixt into a fusible Salt, or fixt oyl, which will be done by the help of the oyl of Gold.

III. When they are all fixed, project one part upon an hundred parts of pure Luna, and it will all be transmuted into fine Sol.

IV. These Oyls of Antimony and Mars we have already taught to make in several of the aforegoing Arcanums, as also the Oyl of Gold, so that it is not necessary here to repeat the same again.

V. But the true Oyl of Antimony we have not yet taught, but in the following Chapter you shall

certainly find it.

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#### CHAP. LXVI.

#### To make the true Red Oyl of Antimony

I. Ake male mineral Antimony ( which is known by its long and fparkling beams. for the female is different, and known by its flender and small beams) three pounds: pouder and dissolve

it in vi. pounds of the pouder of May Dew.

II. Mix them in a long neck't glass Mattrels; and let them purrefy in Horsesdung for two or three months; or in the preffings of the Vintage, where the Putrefactive hear is more exact, and in which you may keep it for amonth.

III. Then distill the matter by an Alembick put upon the head of the Marriels, in warm alhes; and

distill what ever you are able to bring over.

IV. That which comes over put upon fresh male mineral Antimony, and digeft as before for a month, two or three, and distill it after the same manner.

V. Then put what is distilled forth on fresh mineral Antimony, and digest it for fifteen days; then distill it to novo ut prins; and repeat this so often, till the Spirit of the May Dew does arise with the Spirit of the Antimony.

VI. Then take of this acid Spirit one bound: of Male mineral Antimony half a pound digest them in warm ashes for a day, shaking the Glass often, till the acid Spirit be tinged of a red Colour.

VII. This red Tincture decant by Inclination, and affuse thereon fresh Spirit; repeat this so often, by pouring off, and putting on fresh, till you have a great quantity of tinged Spirit.

VIII. Put

Chap. 66. To make red Oyl of Antimony. 575

WIN. Put ally these together, and distill them in Balneo Maria with a very gentle heat, till nothing more will arife

Mand in the bottom of the Glas Alembick. there will remain a red Tincture of Antimony: this distill per Cineres, and a red Oyl of Antimony will alcend.

X. This rectific two or three times in a Glass

Retort, and the Oyl will be pure Red.

XL. This Oyl, distill with the Oyl of Mars; and mix it all with an equal quantity of the Oyl of Gold. and all shall be fixed as in the former fecret; and it is a most wonderful thing to tinge Luna into Sol. XIII If you butrefie male mineral Antimony in

Horfe-dung with water of Turpentine the Spirit will Bearinged into the Galour of blood

an XIII This Spirie whes rubefied, being dischool upon new and fresh male mineral Anomony will cause it to yield more copionally the Oyl of Antimor forefaid filings in a Glafa

WATVanAnd this Owl will be of the fame Virme with the former being prepared after the fame inde third, as by then distributed in Spirit of May Dew. Only boold to mole.

# IVXII de Arte Svill yield no trendill it send in the bottom of the send at cross of excellent Oyl.

noture, and affule more Vine-

ocarer, and more penetraring,

In Diffolve Sal-Armoniack an ounce, in the water or flegm of Vitriol, and as much an ounce of Sulphur Vive.

II. Distill them in a Glass Retort: and after that the flegm of the Vitriol is come over, increase the fire,

and all that the fixed as in the

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and fublime the Sal-Armoniack with the Sulphur Vive. in Peluco Litaria with a very

III. Cast of this Sublimate a sufficient squantity. on melted Silver in a Crucible, and it shall be fixed to receive the following Tindure, nine live and diffill for Cintres, and a red Orl of Am

## X. This taffivx Ivoq A Hears in a Class Recort, and the Cylvill be pure Red.

To extract a tincture from Mars, to Colour Luna:

Ake filings of the best steet; hear them red I hot in a Crucible, and quench them in Atrong Vinegar: this repeat feven or tentimes.

II. Then take four ounces of these filings of Sal Armoniack two drachms Mercury fublimate, as much: diffolve the fublimate and the Sal Armoniack caufeit to yield more cost rath bas rasw mraw ni

III. Put this upon the aforesaid filings in a Glass Retort, or an Alembick : after paid or three days abstract the water : and what remains in the boutdmi dissolve in our Vinegar or Virgins Milk, and it will be tinged into the Colour of blood.

IV. Decant the tincture, and affuse more Vinegar or Virgins Milk, untill the matter will yield no more tincture: then distill it, and in the bottom of the Alembick will remain a red most excellent Ovl.

V. This Ovl will be better, and more penetrating. if you cohobate upon it the Vinegar or Virgins Milk, which will not ascend, but remain in the bottom of the Alembick.

VI. One part of this Oyl cast upon fifty parts of melted Luna, will turn it all into fine Sol.

VII. And if to this Oyl, you joyn an equal quantity Chap. 69. To reduce Sol into Mercury. 577

in Ashes by digestion for a month, your medicine will be the more perfect.

#### CHAP. LXIX.

To reduce Sol into Mercury with common Mercury.

I. T Ake of the best Sol purified with Antimony, and made into small filings or thin leaves, two ounces: amalgamate it with twenty four ounces of common Mercury, washed and purged very well.

II. Divide the Amalgama into four parts, and put it into four feveral Glasses, add to it twelve times as much Aqua Regia, distilled with Sal-Armoniack, as

the Amalgama weigheth.

III. So divide this water, that in each Glass there may be the weight of the Amalgama, so that these twelve parts may dissolve the whole amalgama in a month by digestion in Ashes.

IV. When the Amalgama is diffolved, diftill off the Aqua fortis, and dulcify the remainder with fountain water, till all the Antimony of the Salt or Aqua fortis is taken away, and the water comes off fweet.

V. Let the water be very pure and clear, or diffilled; and have a care that no dust or filth fall upon

the powder.

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VI. Dry all your matter very well in an Alembick,

that the Mercury may be faved.

VII. Then increase the fire, that the whole Mercury may be brought over into the Recipient, and in the bottom you will find a calcin'd Salt, which Reverberate for fifteen days in a Reverberatory.

VIII. So will your Sol be well calcined and

brought into an impalpable spungy powder.

IX. Take half this Gold thus calcined, and the Mercury that was distilled from it, being well washed from the impurities it contracted from the Aqua fortis: take of it as much as of the calcin'd Gold.

X. Mix or amalgamate them very well together

by beating or rubbing them in a Mortar.

XI. Then put it into a Glass well stopt, which bury in warm Ashes for five days, until it be reduced

into a red powder.

XII. To this matter add a third part of fresh Mercury, beat or grind, and mix them together and boyl or digest them in a Glass Mattress, till all be converted into a red powder.

XIII. Repeat this fo often, until the Solhath imbibed fifteen times its own weight of Mercury.

XIV. Put this powder into a great quantity of common water distilled: stirit with your finger that the water may be thick or troubled; then decant it whilst it is so troubled, and put it into a Glass Veffel.

XV. Put on more of the fame matter upon the remaining matter, flirring and moving the water, till it is troubled again; then decant it immediately.

XVI. Thus continue, until the water has taken up all the powder, fo will you have a very fubrile

powder.

XVII. And if there be any thing in the bottom which will not be taken up with the water; calcine it with Mercury, by mixing, grinding and digefting them in a Glass Mattress.

XVIII. Then pass it all through water as before:

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take this water, and let it settle, and let fall its fæces: decant the water from the fæces; so will you have

them of a Golden colour.

XIX. Dry them with a gentle fire, and put them into a Glass Mattress, and digest it in Ashes for a day; then take out the powder, and beat or grind it in a Glass Mortar, and digest it in warm Ashes as before.

XX. Then take it out and beat it again, and repeat this eight times, digefting for a day at a time.

XXI. Beat or grind, and digest it again, then put the powder into a strong Glass Mattress well luted and stopt and bury it in a very hot sand, making under it a very strong fire, and the superstuous water of the Mercury will come forth first.

XXII. At last, the Mercury will come forth in great quantity; for all the powder will be turned into Mercury, and there will nothing remain in the Vessel

but a black powder.

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XXIII. This powder by a strong fire, will be turned into a black Glass. And thus is the Gold re-

duced into Mercury with common Mercury.

XXIV. The Mercury is amalgamated or joyned with the Spirit and Soul of the Gold, and is called animated Mercury; of which are made Golden Mines by the following method.

#### CHAP. LXX.

Tomake a Golden Mine.

I Take of the Gold above calcined, whereof we have left a half part for this Arcanum:

Take I say three drachms, or as much as you have

P p 2 left;

left; and put to it a third part of our animated Mercury, as before prepared.

II. Digest it in a Glass Mattress, buried in ashes; then give a strong fire, that some of the Matter in

the Mattress, may be fixed.

III. Put back that which comes over in the distillation, upon that which is fixed, and beat them together, incorporating and mixing and digesting or boiling in a Mattress till the Calx of Gold has drunk up much of the Mercury.

IV. And if the animated Mercury be spent with the Spirit of the Gold; then substitute in the place thereof common Mercury well (washed) dissolved,

or purified.

V. So will the red powder increase in an infinite quantity; and you may increase as much of this Mercury as you please, making all running and live-Mercury; and it shall be animated Mercury, and of the same Virtue and efficacy with the former.

VI. Which must again be digested or boyled with the Calx of Gold, and by degrees converted into a

red powder.

VII. Of this powder make little pills with Gum Tragacanth diffolved in water, and project it upon melted Gold in a Crucible, and the Calx will be melted with the Gold, and the Gold multiplied.

VIII. After this manner will your Calx be turned into fine Gold, and your Mine be made to increase

for ever.

IX. But then you must keep the said Calx of Sol fermented with the water of Mercury, and convert it into a red powder, and then into animated Mercury, and this animated Mercury into a Calx, and this Calx project upon melted Gold.

#### CHAP. LXXI.

To make the aforesaid Mine have the Virtue of tinging Luna into Sol.

I. Take what quantity you please of this mineral or Mine, and put it into a strong Glass Mattress well stopped in warm Ashes, with a gentle fire for fourteen days, till the Calx has acquired a most red Tincture.

II. This very red Tincture it acquires only by this digeftion, by Vertue of the Spirit of Gold, which

gives the most perfect red.

III. If it be digested longer, it will acquire a greater red, till it looks like deep Saffron or burnt blood, so

deep will be the tincture.

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IV. Take of this rubified Calx of Sol three drachms: of the Oyl of Sol as much; and as much of the oyl of Mars, and the red oyl of Antimony, as above prepared.

V. Mix and incorporate all together and digeft till they are all converted into a most red powder: one part of this will project upon a thousand parts of

melted Luna, and transmute it into fine Sol.

VI. If this powder be diffolved in our Virgins Milk, into a fixt Oyl, be filtered, and clarified afterwards, and digefted and fixed into a fweet oyl with Spirit of May Dew, as we have before taught in many of these our Arcanums, it will transmute ten thousand parts of melted Luna into fine Sol.

VII. And if this Oyl be yet subtilized and attenuated, it will transmute Luna without fire, into

P p 3 Sol

Sol, and that by bare infusion of the Luna in the faid Oyl.

#### CHAP. LXXII.

To transmute Mercury into Sol.

I. Take Mercury j. pound: crude Vitriol, Verdigrife, crude Tartar, common Salt of each one pound.

II. Put the Vitriol, Verdigrise, Tartar, and common Salt, into an Iron pot, upon which affuse the strongest Vinegar, that they may all be dissolved.

III. Being diffolved, put to fire, that they may boyl; and when they begin to boyl, put the Mercury into the Pot, and continue the boyling till the half part of the Vinegar is confumed, or fomething more.

IV. Then take it from the fire, and stir or shake the mattter, and decant what is liquid into an Earthen Vessel; and in the bottom of the Iron pot, you will find your Mercury half congealed or coagulated.

V. This wash very well with common water till the water comes off clear.

VI. Then digeft all this Mercury again with the liquid part of the Vinegar which you decanted out of the Iron Pot, and clarify by adding new Vinegar, and boyling again for two or three hours in that Vinegar in which the Verdigrife, common Salt, Tartar, and Vittiol were diffolyed.

VII. After this decant the liquid part by Inclination, and you will find the Mercury half congealed: This Luna wash again with common fair water, till

the water comes off clear.

VIII. Expose

Chap. 72. To transmute Mercury into Sol. 583

VIII. Expose this Mercury to a cold and moist air for three nights, and it will be coagulated very

hard.

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IX. Reduce it into a very subtil powder, and mix it with the Yolks of Eggs and Crocus Martis, pure Earth (Chalk) fratum super stratum in a Crucible, giving a strong sire for two or three hours; and your Mercury will be like Copper.

X. This joyn with an equal quantity of cupellated or tested Luna; melt them together and test them,

and you will find your Luna tinged.

XI. This tinged Luna melt with an equal weight of the best Sol, and all will be pure and fine Gold,

of a most pure colour.

XII. And if your coagulated Mercury (made hard in the cold) be reduced into a most subtil pouder, and imbibed with Oyl of Mars, and then melted with Luna, all the Luna will be tinged into Sol.

XIII. And thus Mercury may be transmuted into the finest Sol which shall stand all tryals, if fine

Sol be joyned therewith.

XIV. For the Spirit of Verdigrise does convert and fix Mercury into Copper; and then the oyl of Mars does augment its Tincture, and communicate it to the Silver; and by adding fine Sol thereto, all is made into pure Gold.

#### CHAP. LXXII.

To transmute Mercury and Luna into Sol.

I. T Ake of the Mercury aforesaid coagulated and fixed in an Iron Pot with Verdigrise, Vitriol, Tartar and common Salt: Take I say of this P p 4 Mercury

Mercury fixteen drachms: of filver calcined with Salt, Sulphur and Mercury; as much.

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II. Mix them well, and imbibe this Calx with the Oyl of Mars three or four times, imbibing and drying it in a Crucible.

III. Add then of Mercury Sublimate feventeen drachms: and beat or grind them well together, and imbibe it three or four times, imbibing and drying it in a Crucible: then melt it, and all will be pure fine Sol.

IV. This Sol, if thou diffolvest in our Vinegar or Virgins Milk, and it be digested into a red fixed Oyl, and then conjoyned with equal weight of the Oyl of Gold, and fixed together, you will have an oyl, one part of which will project upon an hundred parts of melted Luna, and transmute it into fine Sol, at all assays.

#### CHAP. LXXIV.

#### To tinge Venus into Luna.

I. Take of Luna calcined with Sali, Sulphur and Mercury, and three times repeated with fresh Salt, Sulphur and Mercury: take I say, of Silver thus prepared eighteen drachms: which imbibe in the following water eleven times, imbibing and drying in a Crucible upon the Luna.

II. Then take of Sal-Armoniack eighteen drachms: Mercury feven times fublimed feventeen drachms: mix them together and diffolve them in warm water diffilled; and filter the Solution

III. In this water imbibe the aforefaid Calx of Sil-

ver, and then dissolve it in Spirit of Vinegar.

IV. That

Chap. 75. To tinge Venus into Luna. 58

IV. That which will not diffolve in warm Ashes, calcine again with fresh Salt, Sulphur and Mercury.

V. This Calx imbibe and excitate in the aforefaid Water of Sal-Armoniack, so often, till it is all dif-

folved.

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VI. These Solutions of Luna a put into Glass Alembick or Retors, cohobating oftentimes upon the remaining matter in the bottom, till the Vinegar does ascend sweet and insipid.

VII. Then add floth Vinegar, and again diffolve and coagulate, and that feven times, till the Vinegar afcends tharp, and the folution be turned into a fixed

Oyl or fufible Salt.

VII. One part of this Oyl projected upon an hundred parts of melted Venus, turns or transmutes it all into good Luna.

# CHAP. LXXV.

## To tinge the fame Venus into Luna.

I. TAke of the before prepared Alcali Oyl (in Chap. 38) Mercury feven times sublimed with fixed Sal-Armoniack, of each twenty drachms.

II. Diffolve them in warm common water diffilled; filter the Solution, and abstract the water by distillation.

III. Take this Salt and Mercury, with oyl of Tartar, and diffolve them in the strongest Spirit of Vine-

gar, and diffill to drynefs.

IV. Cohobate this Spirit of Vinegar now drawn off, to long till the matter is converted into a fixe oyl.

V. Project

V. Project one part of this Oyl, upon an equal weight of melted Luna; mix them well in a Crucible, and the Oyl will be reduced to a powder.

VI. Take of this powder one part, and project it upon a hundred parts of melted Venus, and it will

be all, most fine Luna.

VII. If you diffolve this powder in our Vinegar, it will be converted into a fixed Oyl: one part of which will transmute a thousand parts of melted Venus into the best and most pure Luna, not to be parallell'd in purity, whiteness and sound.

## CHAP. LXXVI.

# To tinge Luna into Sol.

I. TAke crude Antimony twenty drachms: as much Crocus Martis: crude Tartar twelve drachms:

Salt Peter as much: powder and mix them.

II. Then put it into a firong Crucible, and with a Violent fire calcine for fix hours: melt it well, that the Regulus may fall to the bottom of the Crucible.

III. The Crucible being cold break it, and take out the Regulus: the rest of the matter dissolve in pure clear fountain water; boyl the Solution and filter it.

IV. To this filtered liquor, add by degrees distilled Vinegar, viz. drop by drop, and a Golden Sulphur of Antimony will precipitate to the bottom.

V. To this Sulphur well dryed add an equal quantity of Crocus Martis, and as much of fixed Sal-Armoniacky.

Chap. 77. To tinge Luna into fine Sol. 587 moniack, with fixteen drachms of Mercury sublimate.

VI. Mix them all and let them stand in a Glass Mattress with a long neck in a strong sand heat for a month: then dissolve all in common water, distilled and warm; filter the solution, and it will be of a fine red Colour.

VII. Distill it now to dryness, dissolve again, and

distill to dryness, doing thus fifteen times.

VIII. So shall you have at length, a red fixed Oyl; to which add the oyl of Sol and Oyl of Antimony, and digest them in a Mattress for a month, till they are all united and fixed together.

IX. So will you obtain a fixed Oyl, one part of which being projected upon a thouland parts of melted Luna, will transmute it all into good Sol at all

affays.

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X. But it will be more strong and effectual, if the Luna on which you do project be fixed: yet the Confequence of this is not very great in this work, because here the Oleum Solis does fix the Luna.

XI. Thus have you a Golden oyl of the fixt Sulphur of Antimony, wonderful efficacious, in the transmutation of Metals, if you know how to work.

#### CHAP. LXXVI!.

To tinge Luna into fine Sol.

I. Take of the water from the above prepared Regulus of Antimony (before the Sulphur is precipitated from it with Spirit of Vinegar) two pounds; Crocus Metallorum well rubified as much.

I'. Make an Amalgama or paste of the Cricus, which

dry with agentle fire, then calcine it in a Crucible for four hours, after which diffolve it in common

distilled water, or May-Dew.

III. Purify and filter the Solution; and what of the Crocus will not diffolye, calcine in a ftrong Crucible with a most vehement fire for a day and a night.

IV. Then imbibe it again with the aforefaid water, and make it pure; which dry, and calcine for two or three hours: after which diffolye it in Spirit of

May Dew.

V. Repeat this the third time, calcining what doth nor diffolve, till all the Crocus is turned into a most

red water.

VI. To this water add Mercury seven times sublimed, and digeft till they be turned into a red Oyl: project one part of this upon thirty parts of melted

Luna, and it shall be all fine Sol.

VII. But if an equal quantity of the Oleum Solis be added to it, and fixed together in a Glass Mattress for a month, it will be the more effectual and powerfull in transmutation.

#### CHAP. LXXVIII.

To make a Water of Mercury.

TAke of Cinnabar of Mercury Sublimed from Vitriol and niter three or four times, always taking fresh Niter and Vitriol: the Mercury thus prepared by the Cinnabar put into a sufficient quantity of pure white Salt of Tartar.

II. Diffolve it by a Retort, and bring over the Mercury Mercury in a live and running body: this strain through a cloth or leather, and mix with it an equal quantity of common Mercury.

III. Put them together into a Retort, and digest in Balneo for eight days, then diffill by a Retort in Ashes, so will you have a water come over in great

quantity,

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IV. That which remains in the bottom, will be a white Salt, which dissolve in a moist place, and rectifyit by distillation in a Retort, always dissolving

what remains in the bottom.

V. That which will not ascend, joyn with your first distilled water, and rectify it seven times, and it will be the best water for performing of many great works, but chiefly the following Secrets.

#### CHAP. LXXIX.

To tinge Venus into Luna.

TAke Luna calcined with Salt, Sulphur, and Mercury three ounces: diffolye this Calx of Luna in a fufficient quantity of the afore prepared Mercurial water.

II. Digest this diffolution in a gentle heat, and distill off the Aqua Mercurii, and cohobate it on the

matter, till nothing more will rife or afcend.

III. Thus at length you will have Oleum Luna, which will transmute Venus into good Luna, one part being projected upon fifteen parts of melted Venus.

#### CHAP. LXXX.

Another way to make the Aqua Mercurii.

I. T Ake of Sol calcined with Mercury, Salt, and Sulphur, three ounces, diffolve it in the above

prepared Mercurial water.

II. Distill the solution, and cohobate so often upon the Solar Calx, till it is converted into a fixed Oyl, or suffible Salt, having passed through all-colours, and becomes red, fixed, and suffible as Wax.

III. One part of this fixed Salt, will transmute an hundred parts of fine Luna, into pure and fine Sol.

IV. If this oylbe joyned with a sufficient quantity of the Aqua Mercurii, and distilled, and all be made volatile; and after by constant digestion be again fixed, its Power and Virtue will be multiplied ad infinitum.

#### CHAP. LXXXI.

To make the Aqua Mercurii another way.

I. Take common Mercury well washed and squeezed through Leather, and inclose it in a strong Mattress with a long neck, which seal up

Hermetically.

II. The Mattress being thus sealed up, put it into a putrefying heat with Woad, viz. where the Woad is prepared in the shops to dye cloth with, there being a great heat, for four or five months: let the Glass

I fay

Chap. 82. To make an Elixir of white stones. 491 I say be buried in the warm Woad, up to half the

neck.

III. Leave it in that heat for three or four months, and in that time will all your Mercury be turned to water, which rectify feven times, till it be most clear, pure and limpid, and leaves no faces in distillation.

IV. With this Mercury you may work great things in the perfect Metals by diffolying and coagulating them, and converting them into a fufible and

fixed Salt.

V. Thereby you have many Secrets, and Elixirs to tinge Luna into Sol, and Venus into Luna; and the rest of the imperfect metals, as Tin and Lead into Sol and Luna.

VI. This Aqua Mercurii may be made in a putrefying heat of the preffing of Grapes, which being

rectified, is of the same Virtue and Efficacy.

#### CHAP. LXXXII.

To make an Elixir of the white stones found among Lead.

I. Take the white stones which are found in Leaden Mines, and towards the North of the same Mines; for that it is most moist: Take I say a stone newly taken out of the Mine, and break it into little pieces, with little pieces also of the Mine or Ore.

II. Put them all into a Retort well luted, and distill for two days in a strong fire, till the Retort

grows red hot.

III. Let the Recipient be large and to a third part

full of the Spirit of May-dew that it may re-

ceive the Spirits that come over.

IV. When all the Spirits are drawn over, and the Retort has been kept in a red hot heat for two or three dayes; then take it from the fire, and being cold, break it.

V. If the matter be of a red colour, it is well; but if it be more of a white, then it is be calcined in a Crucible, with a very strong fire, for fix or eight

hours.

VI. Now we come to the water which is to be diffilled with a very gentle heat, till the Acid Spirits afcend, or are come forth, which are to be received

in an open Veffel.

VII. And the Spirits of May-dew which will afcend first are to be kept: but in the Acid Spirits are to be dissolved the calcined matter, upon which a great quantity of the said Spirit is to be put; and in a Glass Vessel.

VIII. Let it be well stopt, and made to boyl for

an hour, then filter and purify it.

IX. Upon the matter remaining undiffolved, put more Acid Spirit, and boyl it again in a Glass Vessel close stopt for an hour, which filter and clarify as before.

X. Mix and distill all the Solutions to dryness; and dissolve the matter again by affusing thereonall

that which has distilled over.

XI. This folution filter and clarify, and diffill again; which work so often repeat till you have a

white Salt or powder.

XII. If all the matter will not yet dissolve, but some of it does remain, it must be calcined again, and dissolved as before, till the whole or intire matter is dissolved, and converted into a susible Salt, which

Chap. 83. To prepare an Elixir from Pearl. 393 is so often to be dissolved in our Acid Spirit, till by repeated distillations it is brought to a volatility.

XIII. And it is then farther to be diffolved in the faid Acid Spirit, till by repeated diffillations it is brought to a water, which is to be rectified feven

times at the leaft.

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XIV. Then it will have acquired an exceeding penetrating Virtue in diffolying of all Metalls: and in this water thus prepared is to be diffolyed the perfect Metals, as Sol and Luna; one part of the Metal

in ten parts of the water

XV. Mix, dissolve, and digest the Solution, or boyl it, in a Glass Matrass, well closed or sealed up Hermenically, which is better: digest for nine or twelve months, until the water with the Metal dissolved be converted into a suffishe Salt, fixed and red, if you have dissolved Sol in it; or fixed and white, if you have dissolved Luna in it.

XVL Thus at length is it become a wonderfull and strange Secret, the true Arabian Elixir, stupena diously converting all impure Metals into Sol or Linasenado, curro solos secretarios de la constanta de la c

XVIII And by diffolying this powder after congelation, in new and fresh water above prepared, it acquires far greater Virtues in transmutation,

XVIII. And from hence its Virtues and force may

be augmented to an Infinity.

# CHAP. LXXXIII.

To prepare an Elixir from Pearl.

TAke Golden or Silver coloured Pearls, as many as you please, powder them, and mix Q q them

them with an equall quantity of Sulphur Vive. II. Calcine them in a Crucible with a ftrong fire, untill the Sulphur be confirmed; then add new, but not fo much as before, and calcine it as formerly.

III. Increase the fire, and make the Crucible red hot, for four or fix hours; then let it cool, take out

the marrers and beat it small.

IV's Put it into a Retort lute it well all over, and diffill in a ftrong fire, that all the Acid Sulphureous Spirits may come forth, which are to be received in

a Veffel half full of May-Dew

V. When all the Spirit is come over, break the Retort, and take out the Matter, powder it and expose it to the cold air for a night, then put it into a well luted Retort, and with a strong fire distril it into the same receiver, that the yet remaining Sulphureous Spirits may be brought over-

VI. Repeat this work feven times, exporing it to the Air, and then distilling of it, untill the water in the Recipient have an-Acid rafte post ogneral I as

VIII Distill this water in a gentle fire lest it boyl and when the Acid Spirits come forth, change the Receives, and put a clean Receiver to that who may receive them a-part: water and fresh water area mediaphison

VIII. Rectify them feven times, that they may be purified and in this Acid Spirit diffolyethe matter left in the bottom of the Retort after the first

distillations.

IX. And in a Glass well stopt, with a gentle fire, digest the Solution, then filter it, and upon the remaining undiffolved matter, but more Acid Spirits.

X. Diffolve by digesting and filter the Solution; t is do, till the greater part of the matter prepared

f om the Pearls be diffolved.

XI. Distill

Chap. \$3. To prepare an Elixir from Pearl. 595

XI. Diffill this folution to dryness, and put the remaining dry matter into the water diffilled from it; purify and filter the Solution; this do, till you have a pure Salt without any faces subsiding in the Solution.

XII. Take of this Salt what quantity you please, and dissolve it in fresh Acid Spirit well dephlegmated,

and digest the solution in a gentle hear.

XIII. Then diffill to drynels, keeping the Vinegar, and casting away that which comes over first, because it is insipid; or if you please you may put it to the insipid distilled water.

XIV. Repeat this work, till the Salt becomes

volatile, and ascends with the Acid Spirit,

XV. And thus often diffolve it in the laid Vinegar, always separating the slegm which comes first, and repeat it till your Salt be turned into an Acetum,

and rifes with the Acid Spirit.

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XVI. This Spirit rectify seven times, by separating it from its slegm; and in this Spirit thus Rectified, diffolye the perfect Metalls; one part, in ten parts of this divine water.

XVII. Digest this solution in a Glass well stope, or Hermetically sealed (lest any thing ascend) until

the matter is fixed into a fufible fixed Salt.

XVIII. But first it is to be dissolved four times in

our Acid water, and fixed and coagulated.

XIX. Thus have you at length an Elixir most powerful for the transmutation of imperfect Metals

into Sol and Luna.

XX. If there be Sol or Luna diffolved in this Acid water, and congealed by a continual digestion, you will have a stupendious Elixir for the great work.

XXI This Metallick Spirit of a Mineral, may

be drawn from any Marchasite or Mineral, because, it is inherent in them, and does give the formal and effential being to them all.

XXII. But the way of drawing it is more facile in

some than in others.

XXIII. And the true way according to the Chymical Art is here most faithfully delivered, if you understand the way of calcining, disfolving, distilling, and such other like Chymical operations.

XXIV. For these things are absolutely necessary for you to know, that you may separate from the Spirit all sæculential Impurities, the dross or Lees of the

Elements.

XXV. This being thus perfected, there remains nothing at last to be done, but only to digest.

## CHAP. LXXXIV.

To make fmall Pearls into great ones.

I. Take of the least yet clearest and brightest Pearls, what quantity you please, dissolve them in our acid Spirit, or in the water of Mercury, distilled twelve times or more, till it is sweet and clear.

II. In this water I fay, diffolve your Pearls in a Glass, which stop well, and put it over a gentle

heat.

III. When all your Pearls are diffolved, filter the folution and purify it, and diftill in a gentle Balneo.

IV. When the distillation is over, cohobate the distilled water upon the remaining matter, that it may again be dissolved and purified.

V. This

V. This work reiterate so long that at length it may dissolve without any faces, and remain more clear and splendid at the bottom of the Alembick like true Pearls.

VI. Then have in a readiness Silver Moulds, which let be gilded with Gold, made of that bigness and

figure you defire your Pearls to be of.

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VII. And with a filver Spatula take your matter thus prepared, and fill your Moulds on both parts, which let be perforated with a small hole, to pass a filver Wire or thread, through that the Pearls may be bored through.

VIII. Then close your Moulds, (being full of the prepared matter) and let them stand for two or three

days in a warm place, that they may harden.

IX. After which take out your Pearls from the Moulds, and put them into a warm Glass, which cover with another Glass.

X. Or rather hang them in a Vial with a thread fastned to them, and tyed about the neck of the Vial; which Vial stop, and let it stand in a moderate heat for fifteen days, that they may be well hardned.

XI. After that your Pearls are well hardned, take your Mercurial or Acid liquor wherein you diffolved your Pearls, and reduced them to their first matter; in which liquor let some of your Pearl be diffolved.

XII. Often repeat the distillation, till your Pearls are turned to a Volatile Salt, and then to a li-

XIII. Take this water or volatile Salt of Pearls, and put it into the Glass where your Pearls are sufpended.

XIV. Let the bottom of the Glass be round, but let not the Pearls touch the water, but hang as it were Q q 3

about the middle of the Glass; your water covering

somewhat more than the bottom thereof.

XV. This done stop up the Glass close, and let it stand to digest in a warm place, or gentle heat for a month; or so long till your Pearls shine and are of a splendent colour so as to please you, then keep them, for they are perfect.

XVI. Almost after the same manner, you may prepare great and refulgent Rubies, from small ones, but yet it is after a more perfect way and manner.

XVII. If you project of the fixt oyl of Gold on melted Crystall, you may prepare excellent Rubies or Carbuncles according to Art.

# CHAP. LXXXV.

To make malleable Glass.

J. Take Oyl of Luna twenty drachms: oyl of Mercury, or its water feven times rectified, one pound: mix them together and diffill them.

II. Repeat the distillation till the oleum Luna rises

with the water of Mercury in distillation.

III. Diffill this water again till it is fixed, and converted into a fixed Oyl; and this repeat four times.

IV. In the fourth time the oyl of Luna is fixed with the oyl of Mercury, so that they render Glass malleable, for fo great is the Viscosity in your Oyl, that it reingues the brittleness of the Glass, and so leaves it of a malleable temper.

V. The reason is, because that the radical moisture of the Glass is multiplyed by the radical moisture of the Metals, which is plentiful and turgent or fwel-

ling in the cyls of Luna and Mercury.

VI And if in this Oplomade Volatile, Diamonds

Chap. 86. To make Carbaniles of Crystal. 399

should be dissolved, and then digested into a fixt oyl, it would transmute all Glassinto Diamonds, only by

projecting this oyl on melted Glass.

VII. There are also other precious stones comprehended within this oyl, when it is made volatile, and digested, and fixed again by digestion concinually for the space of a year.

MIL. Also this Oyl can turn Glass into precious Stones of any kind whatsoever, if therein (being made volatile) precious Stones of the same kind have been diffolled, and digested with it into a fixed Oyl.

IX. For as Metals are included in their fixed Oyls: to are precious ftones in theirs, as Raymondus Lullius doth witness in many places; the which thing we

shall teach you in the following Chapter 100 select

## CHAP. LXXXVI.

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# To make Carbuncles of Crystal.

I. Take oyl of Sol three ounces: Oyl of the vital Mercury before prepared, two pounds: diffolve the oyl of Sol in the water or Oyl of Mercuty.

II. This diffill so often by cohobating the water of Mercury upon the oyl of Sol, till it does ascend

both red and clear.

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III. In this clear and limpid oyl dissolve the best Rubies, purify the solution, and dissill it so oftentill all comes over, and the oyl does shine and sparkle in the darkest of places: (for the Goodness and beauty of Carbuncles consist in their spiendent Rays.)

Qq4 IV. Keep

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IV. Keep and digest this water in continual digestion for a year in a Glass Matrass Hermetically fealed up, till it is most perfectly fixed, which will be in about a year.

V. Take this radiant or glorious red fixed ovl. and project it upon melted Glass, or rather Crystal

a pound in weight.

VI. For if you use less than a pound weight of Crystal, the Crystal would be turned into a medicine : but two or three grains or drops will be fufficient for a pound of melted Crystal, and will turn it into a pure and shining Carbuncle, which you must cause the Lapidaries to polish

VII. This ovl of Carbuncles is profitable to preferve health, and is equall in Virtues and Properties to the ovl of Gold for the confervation of the same. and the prolongation of life, even beyond the bounds

of humane nature.

#### CHAP LXXXVII.

To beautify Trees with fruit three times in a year.

Ake of that fruit which you would have to grow three times a year : beat it, and express therefrom the juyce, which put into a wooden veffel well closed, adding to it a little Salt, and place it in a Cellar.

II. When it grows warm, diffill it in a gentle heat, to obtain its Spirit; which rectify, and separate

from its flegm.

III. Keep it all, and rectify it feven times, and referve the Spirit in a Glass Vessel well stopt.

V. The

Chap. 87. To beautify Trees with Fruit, &c. 601

IV. The flegm rectify leven times or more, till it

emitts no fæces, but ascends pure.

V. All the faces or body of the fruit calcine (adding new fruit in calcination) in an earthen Pot, able to endure the fire, and in an open fire calcine also a great quantity of fruit, that you may have good store of Ashes.

VI. Let the Ashes be calcined to a whiteness: diffolve the Salt in the rectified matter by boyling in a

Glass Vessel well stopt.

VII. When it boyls, purify the Solution by filtration then calcine the Albest again in a strong Crucible, which done, boyl them in new flegm seven times rectified.

VIII. Purify the folution by filtration; mix all the folutions together, and diffill them to dry-

ness.

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IX. Calcine the Salt remaining in the bottom, and with a gentle fire melt it: then diffolve it again in diffilled flegm, and purify it by filtration.

X. Then distill again, and repeat these operations.

till you have a most white Salt.

XI. Diffolve this Salt in the above referved Spirit, distill them together, and cohobate very often, till the above-mentioned Salt does rife with the Spirit.

XII. This Salt arising, you have in readiness the fruit of that kind, from whence this Spirit and Sale

did proceed.

XIII. Now beat and bruile your fruit, and mix it with some of your slegm, and a little of your spirit: mix them well, and put them to grow sowre in the Sun, and let the slegm be turned into Vinegar.

XIV. This vinegar distill often, and in it dissolve your fixt Salt, and by reiterated cohobations convert

it into a fusible Salt.

XV. This

XV. This Sale volatilize with its Spirits, and being volatile, turn it into water, to which add half of your Salt melted, and digest it into a fixed Salt.

XVI. This fixed Salt volatilize, after the former manner, and convert it into water, to which add half of your Salt melted; convert it again into a fixed

Salt by boyling it in a close Vessel.

XVII. This work you must do four or feven times, making the fixed volatile, and the volatile fixed; and so you shall attain the aforefaid Secret: whose Virtue and property is to adorn Trees three times a year with the fruit of its own kind.

XVIII. The way and manner of doing it is thus: Take of your melted or fixt Salt one ounce; and diffolyeit in five quarts of common fair water, or May-dew: and with this water, water or sprinkle your Tree, and it will cause it to flourish with leaves

and fruit every three or four months.

XIX. But you must observe to gather the fruit as foon as it is ripe; and then prefently again to water the Tree every day, with a little of your former water, wherein is diffolved an ounce of your faid fixed Salt.

XX. It is also to be watered with other common water not forgetting also very well to dung and prime the fame.

XXI. Hence we may conclude the Salt is made volatile and fixed by means of the Ferment.

XXII. If you diffolve the Saltin May-dew, and in this impregnated water moisten or steep Corn, it will be very much multiplyed; the increase will be much more plentiful, and the grains and ears of Corn will also be much larger.

XXIII. After this manner you may multiply and increase Chap. 88. To fix Mercury with the Salt of Tin. 603 increase any other fruit or Grain whatsoever, in very large proportions.

#### CHAP. LXXXVIII.

To fix Mercury with the Salt of Tin.

I. T Ake pure Salt of Tin purified from all its fæces, seven ounces: Mercury seven times sublimed three ounces: mix and incorporate them together, and in a strong Glass sublime them.

II. Sublime a fecond time upon the fæces which

are left in the bottom of the Glass.

III. Then weigh it, and if it be heavier than it was it is well, and doth begin to fix a part of the Mer-

cury with the Salt of Tin.

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IV. Continue the Sublimation of the Mercury upon the fæces, by beating and mixing them together, until all be fixed, and the Mercury remain in the bottom.

V. This will be done about the fiftieth time; for the Mercury is very flowly fixed; but at length it doth fix, and give a Metallick fusion, as Geber witnesseth.

VI. For the proof of the truth hereof, when you have thus fixed Mercury; add a little new Mercury seven times sublimed, viz. about two drachins, or two ounces, which you shall mix and sublime together, and immediately about the third or fourth part will be fixed by the sublimation, and converted into a suffible and fixed Mercury.

VII. Repeat this four or feven times, by adding to your fixed Mercury newMercury feven times sublimed, until you have a great quantity of Mercury

fixed and flowing as Wax.

VIII. One part of this projected upon an hundred parts

parts of melted Copper, will transmute it into fine Luna.

IX. And being projected upon fine Luna melted

in a Crucible, it will turn the Luna into a Medicine. of the same Virtue and property.

## CHAP. LXXXIX.

To fix Mercury into a White oyl, which will transmute impure Metals into Sol.

TAke pure oyl of Mars four ounces: oyl of Sol four drachms: mix them together, and add thereto Mercury feventimes sublimed three ounces: mix and fublime them in a strong Glass Mattress.

II. What sublimes put back to the Fæces, till at

length it be all most perfectly fixed.

III. Add to it new Mercury seventimes sublimed two drachms, and mix them together by beating and grinding them; and fublime so long till that which remains in the bottom of the Matrass be fixed, and will melt as wax, and be congealed in the Cold.

IV. Take of this matter one part and project it upon crude Mercury one hundred parts, and the

Mercury shall all of it be turned into good Sol.

V, Also if you project it upon Saturn, Jupiter,

or Venus, it will turn them all into fine Sol.

IV. And if this Mercury be fixed, and tinged with the fixed tincture of Sol, it will transmute all Metals into Sol.

VII. For Mercury thus prepared is true Sol opened; opened; fixing and tinging all the imperfect Me-

tals into its own fubstance.

VIII. Which substance being perfect and communicable, it transmits its perfection to impure Metals, and perfectly digests their indigested and imperfect substance.

#### CHAP. XC.

To fix Mercury into a white Oyl, which will transmute impure Metals into Luna.

I. Take Oleum Lune, and Oleum Jovis, of each three drachins: to which add Mercury seven times sublimed three drachins: mix and sublime them together.

II. Put back what is sublimed to the fæces, and repeat this work so long rill all the matter be fixed

together in the bottom of the Glass Matrass.

III. To this fixed Mercury add fresh or new Mercury seven times sublimed, and sublime as before, till all be fixed in the bottom of the Matrass.

IV. And that it may the fooner fix, add to every fublimation fresh Mercury: and repeat this, till you have a white oyl flowing like wax, and fixed.

V. Take one part of this oyl, and project it upon an hundred parts of any imperfect Metal; and all will

be converted into most fine Luna.

VI. If this oyl be diffolved or mixed with Mercury water, and made volatile, and again fixed by digeftion, for a year, in a ftrong Glass Matrass Hermetically sealed, you will have a white Elixir, which will project upon all the imperfect Metals, one part transmuting a thousand parts.

VII. He

VII. He who understands this Art, will not contradict these secrets; yet they require an ingenious and exquiste Artificer or Operator to perform them.

#### CHAP. XCI.

## To make a red tineture of Niter.

I. T Ake the best Niter and pouder it; calcine it with Charcoal in an Iron Crucible or Pot: diffelve the calcin'd matter in Spirit of May dew, filter and diffel it to drynes.

II. Calcine it again with a foft of gentle fire, taking great care it melt not, then diffolve, filter, and

diffill it again.

III. Repeat this work, always diffolying with fresh May dew, until you have a fixed oyl of Niter flowing like wax.

IV. This oyl is to be made Volarile, by often dif-

· folving, diffilling and exfecting of it.

V. Take of this volatile Salt, a large quantity, and with May-dew purrefy it for a mouth in Horse

dung in a Gla's Matrass well stopt.

VI. Then diffill till all your matter is converted into the Spirits of May dew, and is purely volatile, and separate it from its slegth by a gentle heat in Balneo.

VII. That which remains in the bottom of the Velfel, and will not alcend by the heat of a Balnetin, diffill per owners, and repeat it feven times.

ry of the World, most fubril and volatile; by the

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sale upon which it is prop

help whereof most wenderfull things, are to be done in Chymistry, but chiefly in the following secrets.

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## To make a white Elining hind

I. T Ake of Leaf Silver, or Silver calcined as much as you pleafe, diffolve it in a sufficient quantity of this Mercury, and the universal liquor above prepared.

III. Digest the Solution for eight days in Horse-

dung, then distill it to dryness.

III. Cohobate that which diffills over upon the remaining matter, always putrefying the Solution for eight days.

IV. Repeat this so often, till the solution of the Limbergunds with the Spirit which differends with the Spirit which differend to this

water wiffill feven emission new Retousing

Vi Patra chis spivin da water as utalib cupellated, teffed, for refined Silves, as it will distributed. II

orni such eight dues ushen ginish incitated state of the beat such the beat such that the

VII. One part of this oyl will transmute athono faind parts of airly bother breed incorpide dlung I it will also pain in the part of the will also pain in the property of the part of the

VIII. If you yet proceed falcher, and make this obline Down thus prepared, volarile, and then bring it again and a faced oyl, it will reamfinite all other Metals into fine Luna, without any free.

IX. And one drop being put upon the Metal will penetrate

penetrate even to the Center of the Metal; and will tinge and transmute into fine Luna all imperfect Metals upon which it is projected.

X. But if it be feven times turned into a water, and then fixed again, it will transmute in an infinite

manner, the faid imperfect Metals into Luna.

XI. And if it be projected upon Luna, it will turn the Luna into a medicine of the same virtue and property: thus will your medicine be multiplyed ad infinitum, nor need you to do the same work over again de novo.

# ed norm rovo C. H. A. P. XCIII. I not norm

To make a red Elixir for transmutation of all other Metalisinto Sol.

I. T Ake of the best Sol seven times purged with Antimony, in fine filings, or in leaves 18. drachins of dissolve it in our above prepared Spirit.

II. Digest the Solution in a Glass Retort in Balnet

Maria for eight days, then diffill it in Ashes. T.

III. Cohobate upon the matter in the Retort (and if need be add new Spirit to help it to diffolve,) to often till the Sol does ascend with the Spirit, in a ted or white water.

IV. In this water feven times diffilled, diffolve as much fresh Sol, as it will take up, and digest this solution in a Glass Hermetically sealed, till it be turned into a most red oyl.

V. This oyl is wonderful in preserving of health; one drop taken once a week does prolong life be-

yond the bounds of humane nature.

VI. Being projected on base Metals, it transmutes

Chap. 94. To prepare the Spirits of May-dew, 609 them into fine Gold: and being projected on Sol, it changes it into a medicine of the same Virtue: and cast on Crystalit produceth Rubies and Carbuncles.

VII. It also makes Glass malleable, and Rubies to be of a resplendent colour: It multiplys the Fruits of all forts of Trees; if some drops be dissolved in

water, and the Tree watred therewith.

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VHI. It likewise renders all Animals more pleasant and strong, and prolongs their lives, thus by this medicine (which exceeds all others) is whole nature renewed.

# CHAP. XCIV.

To prepare the Spirits of May-dew for the former forrets.

I. C Ather dew in the month of May with a clean white Linnen cloth spread upon the Grass; which express from the Cloth; thus gather a very large quantity and filter it.

II. Put this into a great and capacious Glass Matrals, which stop well, and digest it in Horse dung for four-teen days then distill it in Balneo to a fourth part.

III. This fourth part remaining cast away, for it is nothing worth, and that which was distilled digest again in a large Matrass well stopt in Horse-dung for fourteen days.

IV. Then distill to a fourth part as before: do thus four times, digesting what is distilled over, and distilling always to a fourth part, casting away every time the said fourth part remaining in the Matrass.

V. Thus will you have a most pure Spirit of dew, and

for the former

and very penetrating; by the help whereof, you may prepare the calcin'd Sol or Gold, make it volatile, and turn it into Water, as we have taught in chap.61. aforegoing.

VI. Thereby Salts are calcin'd, made volatile and fixed, and converted into a volatile Spirit or water.

VI. And by the help thereof, all the fixed Salts of Metals are made volatile, and converted into a Spirit or water; and if you are indeed an Artist, you may by this turn all Metals into their first matter.

VIII. And out of this pure matter freed from all its faces and Excrements, is made an Elixir, of a

wonderful Virtue in transmuting of Metals.

#### CHAP. XCV.

# The fixing of Arfenick.

I. T Ake well sublimed Arsenick, and mix it with Oyl of Tartar, and make it into a paste, with water of Sal-Armoniack, so as it may be a soft paste.

II. Put this paste into a Glass Matrass well stopped, and digest it in a temperate heat for twenty four hours.

III. Then take it out, and grind it on a Marble, moistening it with Oyl of Tartar and water of Sal-Armoniack; and digest it again, repeating this work four times.

IV. Then grind it well on a Marble; diffolye it in Hoffe dung in a Glass Matrass well ftopt; and

congeal! or evaporate upon warm Ashes.

V. Diffolve it again in Horse-dung, and amalgamate it five times; so will you find your Arsenick fixed and flowing as wax; one part of which will tinge twenty parts of Copper.

VI. If this oyl be diffolved in Spirit of May dew,

Chap. 96. To refolve Sol into its first matter. 611 and purified, and then joyned with an equal quantity of Oleum Luna, and Oleum Mercurii, and coagulated; it will tinge yet more powerfully.

VII. One part thereof being projected upon an hundred parts of melted Venus, will tinge and trans-

mute it all into fine and most pure Luna:

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## CHAP. XCVI.

To resolve Sol into its first matter.

I. W Ithout regeneration no Medical or Chymical Arcanum is possible to be attained: therefore if you desire to obtain any thing from the common Gold, it must be regenerated.

II. If that this Gold may be regenerated, it is to be reduced into its first principles, but chiefly into its vital Sulphur, the Balforne of whole nature.

III. This Sulphur is called Gold; and Gold freed from its Fetters, is enabled to exercise its vertue and strength, and those Actions and Properties that lay hid in it.

IV. To discover this, we must dissolve Gold with Gold, that is, with the internal Sulphur of Nature,

which lurketh or lyes hid in all things.

V. Let us with common Sulphur, fo often draw the Sulphur from other things, that in its center it

may comprehend the Sulphur of another:

VI. Take therefore common Sulphur in a very great quantity, viz. as much as you please; and diffolve it in common Aqua fortis; and circulate it in a glass Matrass well stopped, till the Aqua fortis be sweet and insipid.

VII. Then draw it off by distillation, and put it on fresh.

fresh; digest and circulate in warm Ashes, till it al-

To be fweet, which distill off as before.

VIII. Do thus till the Aqua fortis will be no more fweet, but sharp, and comes over strong: then force it all over; and the remaining matter digest till it waxes white; and continue the heat till it grows of a pure colour.

IX. This matter is fo often to be diffolved in the rectified Spirit of Wine, (the Spirit being fresh every time) until a most red Tincture does ascend

with the Spirit.

X. This Tincture is to be separated from the Spi-

rit of Wine by distillation in Balneo.

XI. Then the Glass is to be removed into Ashes, where the Tincture is to be distilled off; and you are

to rectifie it seven times.

XII. In this Tincture which is the true Sulphur of Nature, is Sol to be diffolved, in a very gentle heat; and being to diffolved, to be circulated, and to often diffilled till it afcends with the Sulphur of Nature.

XIII. Then diffolve more common Sol in this Sulphur, and in a well ftopt Glass digest until all be converted into a most red Oyl, fixed and of a most

fweet odour.

XIV. This most fragrant Oyl preserves and prolongs life, and has wonderful effects in transmu-

tation.

XV. This Oyl wants an equal in Alchymy: for one part thereof will transmute a thousand parts of any imperfect Metal; by projecting it thereon.

#### CHAP. XCVII.

To make the Spirit of Mercury.

I. T Ake Mercury sublimate one pound: of the best Potters Clay three pounds; powder them both, and with Spirit of May Dew, malax them together, and make little Balls thereof, which dry.

II. Being dryed, moisten them with Wine, and dry again: then put them into a Retort well luted, and give fire by degrees for four and twenty

Hours.

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III. If any thing sublime into the neck of the Retort, mix it with more Clay, and moisten it with the liquor which comes over, and again distill it, till nothing sublime, but that the Mercury passes over in a Spirit.

IV. This Spirit rectifie seven times at the least.

V. With this Spirit you may do wonderful things in transmutation of Metals, for which cause I have inferred it among these Secrets.

# CHAP, XCVIII.

To make a Spirit of Lime, which will dissolve all things.

I. Take Quicklime, what quantity you please, and distil Spirit of Wine from it ten or fisteen times; renewing the Spirit, and often pouring fresh on the Calx or Lime, remaining at the bottom.

Rr 3

II. Take

II. Take of this Calx three parts, of Potters Clay eight parts: of pure Salt of Tartar one part: mix them together, and in a luted Retort, distill them with a strong Fire, until all the Spirits come forth.

III. Rectifie this Spirit well: Then will it diffolve all Metals, and work Wonders in Trans-

mutation.

IV. If you diffolve Crystal in this Spirit; you shall have a Salt of Crystal; and a true Secret for diffolying the Stone in both Reins and Bladder.

V. The Dose is half a Drachm in wild Alexander Water: It is also a secret, sure and safe Remedy in

the Gout.

#### CHAP. XCIX.

To transmute Jupiter into Luna.

TAke Jupiter, melt it, and quench it in the Water of Eggshels, and it will lose its crackling and eafiness of melting.

II. Then take it, and amalgamate it with the like

quantity of well washed Mercury.

IH. Wash the Amalgama with common Water and decrepitated Salt: and when the Jupiter rather than the Amalgama is clear or clean, put it into a Refort, and diffil it with a strong Fire, that the Mercury may be separated from the Jupiter.

IV. Wash your Mercury and cleanse it, by presfing it through Leather, and again amalgamate it with the Jupiter, and wash the Amalgama as before,

with Salt and Water.

V. Distil the Amalgama again with a strong Fire: The Mercury wash, and press through Leather, amalagamate

Chap. 100. To make a white Elixir, &c. 615 malgamate it with Jupiter, and distil twelve times.

VI. At last mix half a part of Luna with it (the Mercury being separated from it; ) then test that Mixture, and you will find your Luna much augmented.

VII. This is done by washing and distilling, and amalgamating with the Jupiter; for so is the Mercury fixed, and by its own Sulphur turned into

Luna.

VIII. But if good Luna had been added to it at first, the Work would have been done sooner and better; for the Luna will harden the Jupiter.

#### CHAP. C.

To make a white Elixir to transmute all Metals into Luna.

I. Take Mercury, seven times sublimed; disfolve it in common Aqua forcis; digest the Solution for ten days in Balneo Maria, and in Balneo

distil it to dryness.

II. The matter being dry, fublime it: and dissolve a part of the matter by it felf, in a cold and moist place: The Solution digest for ten days, then distil it, and repeat the distillation three times, which keep in a Glass close stopped.

III. The other part of the Mercury sublime so often in a Retort, rill it be fixed in the bottom

thereof.

IV. To this fixed part joyn an equal part of the Spirit of Mercury, as it is prepared and distilled above, and in a Glass sealed up, putresse it in Balneo for fifteen days, till it grows white.

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V. This white matter fublime in Ashes, into the Sulphur of Nature.

VI. This Sulphur diffolve with two parts of your Spirit before referved; digest the Solution in Balneo

for ten days.

VII. Then gently distil off the Spirit, and what remains in the bottom, is the Oyl of the Sulphur of Nature, which is to be fermented with an equal part of the Oyl of Luna, then digested till it be fixed, and is become perfectly white, in a Glass Matrals well closed.

VIII. This being projected upon fuled Luna in a Crucible, the Luna will become as brittle as Glass.

IX. One part of this Glass, will tinge a thousand

parts of Venus into true Luna.

X. The Oyl of Luna for this fecret is thus to be prepared. Take of the first Luna in Leaves four Ounces: dissolve it in Aqua fortis, digest the Solution for a Month in Balneo.

XI. This digested matter distil per Balneum, with a gentle hear: And to the liquid matter remaining in the bottom, put rectified Spirit of Wine, so much

as may overtop it about four Inches.

XII: This matter digest in Balneo ten days, then

diftil off the Spirit of Wine.

XIII. The remaining matter at bottom, digeft in Balreo for one hundred and fifty days, till it putre-

fies and grows white.

XIV. This white matter sublime, then dissolve it in Alcholisate Spirit of Wine, and digest it in Balneo for ten days; after which abstract the Spirit, and that which remains in the bottom is the Oyl of Luna, and the Ferment of the white Stone.

XV. If this Oyl be filtred and diffolved in the Spirit of Mercury, it will at last become a true Stone,

Chap. 101. To make a tincture for Sol. 617

and of admirable vertues, as is before declared.

XVI. After the fame manner may you work with
Sol, to make the red Elixir, which will transmute
all other Metals into fine Sol.

## CHAP. CI.

To make a red Tincture of Mars for Sol.

I. Diffolve Iron in our diffolving water, and digest the solution in Bahne for ten days.

II. Then draw off the Aqua fortis in a gentle heat: the matter remaining in the bottom diffolve in Spirit of Vinegar, digest it ten days, and then distill off the Vinegar.

III. Dissolve it again in fresh Spirit of Vinegar, and digest it for ten days in Balneo and then distill off

the Spirit ut supra.

IV. To the matter remaining in the bottom affule Spirit of Wine, so much as may cover it fix inches over, and digest the matter in Balneo for ten days.

V. Abstract the Spirit of Wine by distillation, and the red tincture of Mars remaining in the bottom distill till it ascends by the Alembick, which rectify three or four times, or till it be most pure.

VI. Then from its Earth draw a Salt, which purify by many folutions, and calcinations and then joyn it with an equal weight of its tincture, or red recti-

fyed Oyl.

VII. Digest these together till they are fixed into a Rubine, which ferment with Oloum Solis, whose preparation we have taught in several places beforegoing.

VIII. The

• VIII. The matter being all fixed, cast one part upon three parts of melted Sol; and that upon a thousand weight of Luna, or any other Metal, and all will be good Sol.

IX. But farther, if this matter be joyned with the volatile Tincture of Mars, and diffolved, and then again fixed, its virtue in transmuting of imperfect Metals, will be thereby very much increased, almost ad infinitum.

X. And if that one part thereof be projected upon (100000) an hundred thousand parts of any imperfect Metal, it will be all transmuted into good Sol.

XI. And if this medicine be cast upon Sol, it will be transmuted into a medicine of equal virtue to the former.

#### CHAP. CII.

To make an Elixir and medicine of Jupiter for the White Work.

I. Take Mercury of Tin, half a pound; diffolve it in common Aquafortis, and digest it in Balnes for ten days.

II. Then diftill off the Aqua fortis to dryness, and repeat this work three times, viz. diffolving that which remains in the bottom, with new Aqua fortis, and digesting ten days, and distilling off the Aqua fortis to dryness.

III. Repeat the solution again with fresh Aqua fortis; digest ut supra, and then draw off the Spirit in ashes.

IV. Put what remains in the bottom into a strong

Chap. 103. Aleffer Tincture for white Work, 619

ftrong Glass Matrass well luted, and sublime it with a strong fire for six hours.

V. What sublimes, mix with fresh Mercury, drawn from Jupiter as aforesaid, incorporate them together, and make an Amalgama.

VI. This Amalgama wash well, and filter it with clear Oyl, so that the Mercury may not appear to

run.
VII. But a powder being made of both Mercuries with Ashes, let it be sublimed for fix hours; and to this matter add an Amalgama of Luna with the Mercury of Jupiter, and sublime till all remain fixed in the bottom of the Vessel, and melts like wax.

VIII. And this is done, by adding new Mercury of Jupiter sublimed, and then dissolved in Aqua fortis, and again sublimed; thus will it become fixed and

flowing like wax.

IX. This medicine being projected upon Saturn, Jupiter, Venus or Mercury, converts them all into fine Luna; one part being projected upon an hundred of any imperfect Metal.

X. And if it be projected upon fine Luna, all the Luna will be turned into a medicine of equal Virtue

with the former.

#### CHAP. CIII.

# A leffer tincture for the white Work.

I. Ake common Salt dissolved in May-dew, and so often coagulated, till it will melt in the fire like wax which that it may the sooner be performed, every time you coagulate, melt it in the crucible, and so cast it into the water of May-dew.

II. Then

II. Then it is to be filtred, and this is to be for often done, till it will melt like wax as aforefaid.

III. Take of this matter, nineteen drachms: of pure white Salt drawn from Egg-shells nineteen drachms: Mercury seven times sublimed and dulcified, twenty drachms: pure white Salt of Vitriol eighteen drachms: mix all well together.

IV. Then put them into a strong Glass Matrass well luted, and sublime them with a strong fire four

or feven times.

V. To this matter add of fublimed and fixt Arfenick, eighteen drachms: of calcined Luna nineteen drachms: of fublimed and fixed Sal-Armoniack eighteen drachms: mix them.

VI. Then fublime them, and repeat the fublimations upon the faces, till the whole matter be fixed,

and nothing more will afcend.

VII. Then dissolve this whole matter in a coldand moist place, letting it run per deliquium; filtre, purify, and coagulate the Solution.

VIII. This Coagulum dissolve in May-dew, till

all be converted into a fixed Oyl.

IX. One part of this Oyl projected upon an hundred parts of fuled Venus, will transmute it all into

fine Luna,

X. These Salts thus prepared and made fusible, receive their chiefest Tincture from the Arsenick, Mercury, and Lunz', which are all dissolved with these Salts, and by Art prepared, and converted into a white fixed Oyl.

XI. This Oyl wonderfully tingeth, and by tingeing doth fix; for it has in it felf fixedness, and

permanency, in the fire.

### CHAP. CIV.

Of the Physical Stone made of Dew.

I. Take a great quantity of April, or May-dew, and diffill it with a gentle hear, till it becomes fomewhat thick in the bottom of the Alembick.

II. Put into this water a quantity of the Loadflone, and from the same with a very strong fire, in a Retort, draw forth an acid or sharp Spirit, which recti-

fy feven times and referve it.

III. The Loadstone calcine with a strong fire in a strong Crucible for three hours, and extract a most profitable Salt, with the slegm of the Dew, before distilled, by boiling the Loadstone in the said slegm.

IV. Filter the flegm and diffill it in an Alembick, in the bottom of which you shall find a most pure

white Salt.

V. This Salt calcine in a Crucible with a ftrong fire, three or four hours; and then diffolye it in the

Spirit of May-dew, before prepared.

VI. This folution filter and diffill with a very gentle heat, and that which remains in the bottom, diffolve, and filtrate, so long till it emits no faces in disfolution, and remains in the bottom of the Alembick, in the form of a most pure white Oyl.

VII. Sublime or cause this Oyl to ascend with a very strong fire into the Sulphur of nature: This Sulphur dissolve in the Acid Spirit above prepared and

reserved.

VIII. This Solution purify, and dry or evaporate

it by distillation; and again dissolve it and evaporate it by distillation; and this so often repeat till your Sulphur is dissolved into a volatile water, and ascends by the Alembick with the acid Spirit.

IX. And thus is this Acid Spirit made the true Vinegar of the Chymists, most sharp, and dissolving

all things.

X. Take of this most sharp Vinegar twenty eight drachms: of the finest and best Sol seventeen drachms: dissolve the Sol in the said Vinegar.

XI. Digest this solution in a Matrass well stope for a month, then put it upon an Alembick and di-

still it to dryness.

XII. What distills, cohobate upon the matter remaining in the bottom, and repeat this work so often, till it is all converted into a red fixed Oyl in the bot-

tom of the Matrass or distillatory.

XIII. Separate the flegm, or infipid drops of water, which came over first in the distillation of our Vinegar; and put that only upon the remaining matter which is sharp or acid, till it is all fixed into a red fixed Ovl.

XIV. One part of this will turn a thousand parts of any imperfect Metal into pure Sol: and if it be projected upon an equal weight of fine Sol, it will convert it all into a medicine of the same Virtue and

property.

XV. And if you diffolve this medicine with new and fresh acid Spirit, and digest it again in a well stopt Matrass, till all is turned into a red fixed Oyl, your medicine will be multiplied both in quantity and Victue.

### CHAP. CV.

## To fix Mercury.

Ake Mercury dulcified and often fublimed eight drachms: Salt peter depurated and freed from all its common Salt, as much: mix them together.

II. Sublime them in a strong Matrass, with a very strong fire: then sublime without the faces which

are left in the bottom of the Glass it

III. And fo long fublime, till it is fixed in the bottom; so have you a fusible, fixing, and tinging Mercury; of which one part will go upon an hundred parts of melted Venus.

IV. And if this fixed Oyl of Mercury, be joyned with the fixed ovl of Luna, it will tinge the more powerfully, and its virtues will be multiplyed.

V. And if this fixed Oyl be diffolved in our strong Vinegar, prepared in the former Chapter it will be all converted into a Spiritous water, which will pe-

netrate and diffolve all things.

VI. And herewith are performed strange and stupendious fecrets, with Sol, Luna, and precious Stones, in order to mans health, as also for making Glass malleable, and turning it into precious stones.

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### CHAP CVI

# To congrat Mercury into Luna.

I. Ake Anripigmentum half a pound : Mercury Sublimate as much; mix them, and grind them till they become a most fine powder.

II. Put it into a Retort, and distill Caccording to Art ) in Ashes a gummose liquor, which rectify se-

ven times.

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III. Then take well washed Mercury four ounces. which amaleamate with filings or leaves of the most pure Luna: wash the Amalguma with Salt and Spirit of Vinezar till it be white and pure.

IV. Imbibe this Amalgama in the former liquer. and digesticin a Manass covered with Lutum Sapientia close floor in a ftrong fire, for four days, and

increase the fire for eleven bours.

V. At last melt it in a Crucible, and it will be

most fine Luna.

VI. And if you add a little Calx of Tin well calcined and well washed, it will be better, and you will find in the fusion a greater quantity of Luna.

#### CHAP. CVII.

To extrast the Mercury of Antimony

Ake flowers of Antimony made per se in an earthen Vessel, as much as you please; and add thereto pure Salt of Tartar in very fine powder, Quick Chap. 108. To convert Lead into Mercury. 625 Quick lime, and Sal-Armoniack, of each as much as of the flowers of Antimony.

II. To these add of the best Spirit of Wine a sufficient quantity; and in a Glass Matrass well stopt, digest them for a month in warm. Horse-dung, or in Balboo.

III. Then diffill, and at the end of the distillation, you will find a running Mercury of Antimony in the bottom of the Receiver.

# C H A P. CVIII.ow aid

# To convert Lead into Mercury.

TAke of the best Salt of Borax three ounces:

Salt of Lead three ounces: Oyl of Tartar
three ounces: filings of Lead four ounces: Sal-Armoniack three ounces: The best Spirit of Wine six
ounces; mix them well together.

II. Put them into a Glass Matrass, stop it well, and digest in Balnes for a month; then distill, and a running Mercury will be drawn from the Lead.

with Oleum Lune; and into Sol, with Oleum Solis; the manner and way of doing which, you may collect out of fome of the aforegoing Chapters.

#### CHAP. CIX.

A tincture of Sol for the transmutation of Luna.

I. Take of the mineral of Sol, (which has not yet past the fire) one pound, beat it into S f

Juted Retort

II. Distill with a strong fire, and what comes over

keep in the Recipient close stopt.

What remains in the Retort, expose (whilst it is yet hot ) to the cold Air for a night; and in the morning put it into the Retort again, and diftill it as before into the fame Recipient.

IV. What remains in the bottom of the Retort. expose again (whilst it is yet hot) to the cold Air for a whole night; the next morning put it into the

Retort again and distill it.

V. This work repeat to often till you have a very

great quantity of Water.

VI. Then take your mineral which remains in the bottom of the Recort, and diffelye it in a frrong Aqua fortis.

VII. Purify the folution, and digest it for a whole

month in Balneo Maria.

VIII. Then diffill to dryness, and cohobate the water distilled off upon the faces till it grow sweet.

IX. After which, dissolve the matter remaining in the bottom, with the above referved water (in the receiver well stopped ) drawn from the mineral exposed to the cold Air.

X. Being dissolved, filter and purify the Solution; putrefie it for a month in Balneo, then distill to dryness: cohobate, and distill again, untill your matter ascends the Alembick in a wonderfull Salt.

XI. This Salt dissolve, and distill till it is converted into an Acid Water, which rectify, and free

it from all its infipid flegm.

XII. Then in this most strong rectified Vinegar, dissolve Sol calcined with Salt and Mercury all being well dissolved, purify the solution and digest Chap, 110. Atinthure of Luna for Metals. 627 it (abstracting the slegm if any be) untill the matter by a constant digestion is converted into a red and fixed Oyl.

XIII. This Oyl (as the other above prepared red Oyls) may be multiplyed, and its Virtue and power

extended in like manner.

IX. One part thereof will project upon a thoufand parts of any imperfect Metal, and transmute it into most fine Sol, without comparison.

# CHAP. CX.

# A tincture of Luna for other Metals.

I. Take of the mineral of Luna in gross powder two pounds: Mercury seven times sublimed half a pound: mix them together, and in Balnes Maria putrefy them for a month.

II. Then distill into a Recipient well joyned or luted to the neck of the Retort: what comes over into

the Receiver, keep therein well stopped.

III. The matter remaining in the Retort, expose while it is yet hot, to the cold Air for a night: break the Retort, and if any thing be sublimed into the neck thereof, bruise and grind it, and mix it again with the matter.

IV Then distill it as before, and keep the liquor that comes over into the Recipient, with the other close stop; and expose the matter whilst yet hot

to the cold Air for a night ut supra.

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V. What fublimes or afcends, if any be, mix with the remaining matter, and again diffill in a new Retort.

VI. This work to often repeat, till you have a ve-

ry great quantity of Acid water, which rectify, and

separate from its flegm.

VII. Then dissolve of the matter remaining in the Retort four ounces; in a sufficient quantity of Aqua fortis: you are not to dissolve all your matter, because it will be too much; four ounces will be enough.

VIII. Digest the solution in Balnes for a month, then diftill and dry it: and this work fo often repeat. till your dissolved matter is converted into an ovl.

IX. Diffolve this Oyl in the Acid water above referved in the recipient: then distill it to dryness, and so often repeat the distillation, till all the Oyl ascends with the Acid water, and the whole becomes one Acid.

X. Rectify the Acid liquor feven times; and therein dissolve a fit quantity of Luna, and repeat the folytion and distillation, till it be all turned into a fixed Ovl very clear.

XI. This Oyl converts all imperfect Metals into

fine Luna.

X'I. And if you diffolve it again in the above referved Acid water, and according to art digest it into a fixed Oyl of Luna, one part will go upon ten thousand parts of any imperfect Metal.

XIII. And being projected upon Luna, ft converts it into a medicine of the same virtue and property.

### CHAP. CXI.

To make a red Oyl of Vitriol, a secret in the cure of all difeafes.

TAke Salt of vitriol a pound: make it red by manifold Calcinations and Solutions, so often iterated, till it comes to the highest redness.

II. Diffelve

Chap, 111. To make a red Oyl of Vitriol. 629.

II. Diffolve it in the best rectified Spirit of Wine three pounds; and digest the solution in Balneo Ma-

rie for a month.

III. Distill it in a Retort, with a strong fire; cohobate the Spirit upon the red Salt, and so often repeat the Cohobation, till with the Spirit of Wine, a red Oyl ascends; or the Spirit is tinged with a red tincture from the Salt of vitriol.

1V. Distill this tinged Spirit in Balneo Marie, with a gentle heat, and the red tincture will remain in the

bottom.

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V. The Spirit of Wine thus denudated of its tincture, put upon the Salt of vitriol again, that it may be again tinged.

VI. Repeat this till your Salt of Vitriol is all come over with the Spirit of Wine, or converted into a

volatile Tinclure.

VII. This tincture separate also from the Spirit of Wine, and rectifie it three or four times by a Retort in Ashes.

VIII. In this rectified tincture diffolve the Calx of Sol; fo will it become fixed by means thereof,

and both converted into an Oyl.

IX. This being by art made volatile, and then fixed again, becomes a very great medicine curing all diseases; and purifying or purging the seprofy of all Metals.

X. One grain of it is sufficient for the prolongation and conservation of humane life for many years; and

for curing of any difeafe.

XI. One grainalso is enough to transmite a pound of Saturn, Jupiter, Mercury or Luna into the most fine Sol.

CHAP.

Sf 3

### CHAP. CXII.

To extratt a red Tineture from Arfenick.

I. Take Crystal Arsenick half a pound: pouder it very fine, and dissolve it in common Aqua fortis seven times distilled and rectified.

II. Filter and purify the Solution, and digest it in

Balneo for fifteen days, then diftill to dryness.

III. Dissolve again in the self fame water that came over, cohobate upon the faces, dissolve, clarify, filter, and distill, and do thus so often, till it dissolves without any faces, and the solution becomes of a red colour, with a white Salt settling at bottom.

IV. Separate this Salt, and keep it for the white

tincture, to project for the white.

V. Now take only the folution, and put to it a fourth part of Sol: but let the Sol be first dissolved in Agna Regia.

VI. Then joyn the Solutions, and digest them, in Balneo Maria for a month, and then distill to

dryness.

VII. Cohobate, or again put back the water to the fieces and again diffolve, purify and filter the Solution, and dittill to dryness.

VIII. Diffolve again, and repeat this work, till it emits no faces, but your matter is converted into a

most rubicund Oyl.

IX. This Oyl circulate in a Glass Matrass with a long neck well stop'd, till the Oyl is so fixed, as that it will not in the least ascend.

X. Take of this Oyl one peny weight, and project

Chap. 113. The conclusion of this fixth Book. 631 is upon the Luna one pound, fused in a Cracible, and it will transmitte it all into the most pure Sof.

# CHAP. CXIII

# The conclusion of this fixeh Book.

I. I the production of Soi and Luna hand dedicate them to the Sons of Philosophy, not as traving been all experienced by me, but as they are agreeable to realon, the principles of Alchymy and true fundamentals of Art. I am unwilling to draw you into expenses, or cause you to exhaust your Treasure, confume or lose your time may delight in that you may reap fruit by our Instructions,

II. For this purpose it is necessary that we convert Metals whether pure or impure into a pure Sale: for it is only profitable to us that by a Metallick Salt we tinge the saline parts of Metals: to which purpose the Archive in this present work wholly trend: teaching how Metals and Minerals may be converted into a

pure faline and fufible lubstance.

III. Thes proceeding in this Art of Alchymie, you will not blame but praite me, for that I advice you not to things vain, but such as are advantageous and profitable. This is the secret in Alchymic as I have said, to convert Metals into a suffible Salt; to volatilize this Salt with the Spirit that turned the Metal into such a Salt; to make the volatile fixt, and the fixt volatile again; and this again fixt, till it is able to digest and tinge the Impersect Metals into Sol and Luna.

IV. This is done by diffolution and Coagulation.

S f 4

This

This is the Summ and accomplishment of the whole Art; there is nothing more true in this learning; God himself is wirness. By the Arcana here laid down, you may fee how fruitfull Alchymy is in the production of Soland Luna: but this you will never compleatly perceive, unless you understand the humidum Radicale of Metals ; and how to free and depu-

rate it, from its impurity and faces.

V. For the tradimutation of Metals confifts only in the pure and fixed Metallick radioal moisture, educed by patience and constancy on operating of for they require a long time to be brought to a laudable and defired end: Art is long and tedious, and requires a patient, learned expert and constant Operator. Chymical fruits are not fuddenly brought to maturity, but by length of time, and a previous and continual digestion, therefore is patience and constancy so requifite. Swissily

VI. Chymistry imitates Nature, and is tedious in digesting and perfecting of Metals. The very fruits of Vegetables call for a years digestion, much more will the incorruptible fruits of Minerals and Metals exact a longer time to accomplish their maturity and perfection: for the Metallick substance cannot be perfectly and abfolutely united with its Radical juyce, but by length of time, and a previous digestion.

VII. The perfection of all Metals confifts in the well depurating of their Metallick juyce or moisture; and fo absolute a union between them, that the ftrength of fire shall not be able to separate them. Therefore think not much of the time you imploy in depurating and digesting of this Radical moisture or juyce of Metals in these our preceeding Arcana.

VIII. For thereby it is manifest that the Metallick juyce

Chap. 113. The Conclusion of the fixth Book. 633

juyce or moisture is freed from its Elementary faculencies, and by digestion perfectly united and joyned together. The truth of these things I doubt not of in the least, although I have not actually experienced them all, because they are clear by the principles of Art and Nature, the latter of which will not deceive you, if you act according to her Method.

IX. I have experienced fome of these secrets to be true; wherefore I believe the rest to be so and I doubt not but you will find them most faithfully laid down, if you exactly adhere to, and sollow what is written, having patience in digesting, uniting, and fixing, according to the tenor of the Arcanum you

pretend to follow.

X. And if they require a longer time than I have prescribed, be not backwards to give it, till you compleat what you feek for: and although the depuration and digestion be very tedious, yet this encouragement you have, never to be frustrated of the perfection you seek after. Love and wish me well; and so Farewell.

The end of the fixth Book.

Chap to g. The continued the Saltate for

the commoditure is insed from its Elementary factleaders and by discition perfectly unlock and journal researce. The test not thefe therest doubt not of in the leaf-school by large not actually experiencease on all because casy are close to the principles of Areand Manne the latter for high will not declibe the in you act according to her specied.

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# POLTGRAPHICES

# LIBER SEPTIMUS.

# PHYLAXA MEDICINE:

Or a Cabinet of choice Medicines, collected and fitted for Vulgar Use.

By William Salmon Professor of Physick.

### CHAP. I.

Aqua Regulata, Our Eye Water.

Abe Fennel Water, or White or Damask
Rose Water five quarts: Salt of Vitriol,
Saccharum Saturni, of each two drachms
and an half: Dissolve, digest ten days, and
filter through brown Paper: Then take rectified Spirit of
Wine six or seven Ounces, dissolve therein Camphire sive
drachms; sine Aloes, choice Opium, of each three drachms
and an half: Let it settle, then decant the clear and filter
it:

it: Joyn these two Liquors together, and add thereto Regulus of Antimony, or Crocus Metallorum in very subtle Powder, sive ownces: Shake all well together three or four times a day for ten or twelve days, then let it settle, and keep it quiet upon the saces for use.

II. This is inferiour to no Eye-Water extant, but is one of the best Remedies yet known for Blindness, dimness of the Sight, Pin and Web, Pearls, and most other Infurnities of the Eyes; it eases all manner of Pains, and cures Diseases of the Eye to a miracle.

III. It takes away Suffusions, Clouds, Pearls, Bloodshot, only by washing therewith three or four times a day: It cures fore Eyes, running Eyes, salt, hot and sharp Rheums in the Eyes, Ulcers, Fistulas, &c. having made several see, who to my knowledge have been long blind. It is a powerful and magistral Water for this purpose, and therefore ought to be kept as a Jewel.

IV. If there be any Sores or Ulcers in the Eyes, you will find the Water the more beneficial, if you diffolve a little Virgin Honey therein, and then to ne it as aforesaid.

V. It cures all forts of Ulcers in the Mouth, Throat and Nostrils, or in any other parts of the Body, whether Scorbutick or Venereal; you may wash the Ulcers with Cotton or Lint dipt in the Water.

VI. It is a most excellent thing for Ulcers and Sores in the privy parts of Man or Woman, it eafes the Pain, cleanses the part, astringes, and in a little time compleatly heals the Ulcer only by washing, or injecting of it in with a Syringe (fit for those parts) three, four or five times a day.

VII. It is of fingular use in easing Pains of the GOUT, repelling of the Humors, and resolving of the tartarous matter, by bathing the part affected therewith Morning and Evening, and applying Stuphes wet therein to the same.

VIII. It is of excellent use against all manner of Scabs, Pustles, breakings out, Tetters, Ringworms, Morphew, Scurf, Spots, and other deformities of the Skin, by washing them with it six or seven times a day, for some days, and applying Cloaths wet in

it, over the faid Defects for a few Minutes.

IX. Being drawn up the Nostrils, or cast up with a Syringe, it is a good Errhine to purge the Head of Flegm, Wind and Water, and eases the vehement Pains thereof: You may use half an ounce at a time, or more, an hour or an hour and an half before bed-time; it purges strongly by the Nose all watry humors; helps the Lethargy and noise in the Ears, and brings away Catarrhs.

X. The Temples being bathed therewith, and then linnen Cloaths dipt in the fame, and applyed to the part, gives present ease in the most vehement Headach, allays the force of Frenzies and Madness, takes away Watchings and Restlessness, and provokes Sleep

and Quietness.

XI. Lastly, after due purging, it cures the Gonorrhoea in Men, and the Whites in Women, being injected into the Yard or Womb with a fit Syringe, five or fix times a day. Price twelve Pence an Ounce.

### CHAP. II.

Aqua Bezoartica, Our Cordial or Plague Water.

TAke Virginia snake root, Contragerva, Zedoary. of each fix ounces: Cinnamon, four ounces: Cloves, Mace, Nurmegs, Cubabs, Cardamoms, Caraways, Bay-Berries, Juniper-Berries, Gentian, Winters Cinnamon, Jamaica Pepper, Black Pepper, Ginger, of each three ounces : Saffron, Cachenele, Limon Peels, Orange Peels (the yellow only) of each two ounces: Rosemary and Lavender Flowers, Angelica, Bawm, Mint, Pennyroyal, Sage, Savory, Time, Sweet Marjoram, of each three handfuls: Spirit of Wine three gallons: bruife what are to be bruifed, and digest all together for twelve or fourteen days: then put thereto white Wine four Gallons: difil all in a proper Alembick with its refriger story, and draw off three gallons of pure Spirit, which refervesteen change the Receiver and draw off two Gallons of a Cordial water which keep by its felf, and make one half of it into a fyrup with fine Sugar. Then take Venice Treacle, Mithridate of each three pounds and a half, which diffolve in the above referred Spirit : digest twenty days, shaking it two or three times a day; then let it settle, and decant off the clear Timbture: to the Magma put the other half of the Cordial Water, mix, digest and shake it for twenty days, then decant and mix it with the former Tincture. Mix these Tinctures with the above-prepared Syrup, and keep them in a Glass close stopt for use. This if you so please you may perfume with Musk, Ambergrise of each a Scruple.

II This Water is good in Sadness, Melancholy, and dejection of Mind; is profitable against Pains and afflictions of the Spleen and Hypochondres. It is a

very

very great Cordial, revives all the Spirits, exhilarates, and makes merry a fad and drooping Heart.

III. It powerfully refuts Poylon, Plague, Small-Pox, and all forts of malian Feavers: it cures the biting of all fores of Serpents and other venomous Beales: it strongly provokes the Terms, and is of profitable use in the firs of the Mother

IV At is a good Stomatick, comforts the Head Brain. Nerves and Bowels, by warming them: it causes a good Appente to Food, and a strong Digestion, by Arrengthning the internal faculties of the Stomach. expelling Wind, eafing the Colick, and taking away

fickness at Heart and Stomach.

W. Itis a very admirable thing against Diseases of the Head and Nerves, as Head-ach, Megrims, Vertigo's, Lerhangies, dulnes, Drowfines, Palies, Apoplexies, and the like: and it may be of good use, to be continually drunk by fuch as are affected with the Falling Sickness, or have any Distemper proceeding from cold and moisture of the Brain.

VI. It is very profitable against the stupefaction of the Senfes, Catarrhs, defluxions of Rheum, Rheumatisms, Faintings, Swoonings, suffocation of the Womb, or Fits of the Mother: it provokes Urine, and is very good against the Stone, Gravel, or Slime

in the Reins and Bladder.

VII. This Water is Sudorifick, Alexioharmick, and Antefebritick; it is powerful against all forts of Pestilential Feavers, as also against Hecticks, and Confumptions. It is a Cordial, Cephalick and Neurotick, and a great Restaurative: it opens Obstructions, attenuates, and is excellent against all cold and moist Diseases.

VIII. It cures the biting of Mad Dogs, expels the Poyfon of Vegetables or Animals,; quickens the Senfes. Senfes, restores the decays of Nature, comforts the Brain, clears the Eye fight, repairs the weakness of the Memory, and brings again the lost Speech.

IX. This Water is good also against Surfeits, Coughs, Colds, Catarris, etc. It is excellent against Pains and Stitches of the Sides, and is prevalent against a Pleurisie (more especially being mixt with equal parts of our Gutta Vica or Cordial drops) being

Anodyne and caufing reft.

X. The Dose and manner of using it. You may give from half a spoonful to two spoonfuls, or more at a time, in the Morning fasting; a little before Dinner, and at night going to Bed. It may also be taken in the same Dose, at any time of the Day or Night, upon any Fainting, Swooning, or sickness at Stomach, or if any other emergent occasion requires it. Price six Pence an ounce.

# CHAP. HI.

Catharticum Argenteum, Or our Silver Purge.

I.T Ake of the best native Cimabar reduced into sine Ponder, sive ounces: sine Silver in Leaves, an ounce and an half: the best Copper in small Pilings a drachm and as half: dissolve each apart in double Aqua fortis, or the best Spirit of Nitre: make a precipitation of the Calces, which you shall free from the corrosive Spirits of the A.F. or Spirit of Nitre according to Art. These Calces dissolve again apart in Spirit of Honey, or Spirit of Salt; precipitate again and sweeten as aforesaid; from which being mixed together, you shall three times burn off restissed Spirit of Wine. The Calces thus sweetned and dryed, you shall put into a Glass Matrass, upon which you shall affuse our universal

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universal Menstrum fourteen ounces (which is the Menstrum of the World, and a true dissolvent;) set them in a philosophick heat, or the Fire of Nature, for twenty four Hours; so will it radically dissolve the Calces, and bring them into their first matter: this Dissolution decant, sitter, and keep it for use. Upon the remaining Calx undissolved (if any be) affuse more of the Menstruum, which digest, decant and silter as aforesaid. Thus continuing the affusion of new Menstruums, so long till the whole Calx is dissolved, you will have at last, an almost colourless, smelless, tastless Liquor, especially if it be mixt with any other Vehicle.

II. Here is to be noted, that this Menstruum adds nothing of vertue to the Medicine, but only by accident, as more perfectly dissolving and opening the Bodies of those several Calces, whereby their potestates or powers more easily mingle themselves with the sanguineous mass, and thereby fix their Cha-

racter upon the habit of the whole Body.

III. By means of this Menstruum, the purging of the Medicine is not only certain, but determined to a certain time; for whereas without this Dissolution, the Particles of the Calx might too closely adhere to the Tunicles of the Stomach, causing a continual working, sometimes for two, three or four days together; now no such thing can be, by reason of this liquid form, whereby it is seldom known to work above two, three or four hours at most.

IV. If the Stomach be foul, it will cleanse it, and work gently both by Vomit and Stool; if the Stomach be not foul, it only works downwards; if it be given in a small Dose, it works neither upward nor downwards; and yet by a constant taking it for some time, as 2, 3, or 4. Months, it cures almost incurable Diseases, without any manifest alteration.

Tt V. In

V. In all chronick Difeases, it ought to be used, (as well as for Purging) in a dieterick way, constantly giving of it in a few drops, as two, three, four, six, eight or ten, as is hereafter expressed, and five or fix times a day, by which means it insensibly alters the whole habit of the Body, and may indeed serve instead of many other Diets in these very cases: for this is very certain, That unless the whole habit be absolutely altered, no cure can be expected; for the cure in such Diseases, always follows the alteration of the habit, as every Man experienced in Physick does sufficiently know.

VI. This Silver-Purge opens all Obstructions of the Bowels, as Lungs, Liver, Spleen, Reins, Womb, Mesentery, and lacteal Veins: but here is to be noted, That it ought to be given in Obstructions of the Lungs for twelve or fixteen days, in such a proportion, as it may neither vomit nor purge, and that in all the Liquor the fick drinks, five or fix times aday. In other cases you may give it in the largest proportion, that is fit for the Age and strength of the

person.

VII. It cures Agues and Feavers of all forts, at two, three or four times taking, and I have oftentimes cured an Ague with it, at once taking, year

Tertians and Quartans.

VIII. It is a most specifick Remedy for the cure of most chronick Distempers, as hypochondriack Melancholy, Quartans, pains of the Stomach, sweling of the Liver and Spleen, Cachexies, Greenfickness, stoppage of the Terms, &c.

IX. It cures almost all Diseases of the Head, as Headach, Megrim, Frenzy, Madness, Fallingsickness, Apoplexies, Convulsions, Palsies, Lethargies, Verti-

goes, and other like Diftempers of the Brain.

X. It

All It carries of the impurites of the Stomach, cleanies the Blood, neckores it to its course and endudations, cheuthes the flear, revives the viral Spiris, neckores the functions of all the Party, adding to the Body strength and vigour.

XI suggested the come given in the paproxysm, to us it may not work; but when the Parosayim or this over, to us that it may work fittingly; childring also every Night (in the intervals of purginal in Dole of on Cordial Pills, in Chap. 28. fol-

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Will almost the Scurvy, Diopsie, and Kingsswil, almost to a Miracle: so also the Jaundice, Sciatica, Worms, Rickets in Children; Consumptions, occasioned through manifold Obstructions, Fits of the Mother, and most other stubborn Diseases not to be cured by vulgar Medicines.

XIII. It is also eminently good in the cure of all running Sores, old Ulicers, Fissina's, Pox, oc. in any part of the Body, or proceeding from what cause soever. It cleanses the Body, discharges it of its Feculencies, and removes or destroys the most

pernicious symptoms:

MAV. The Dose and manner of raking it. It is commonly given either as a Diet, whereby the Body is only altered; or with an intention to parge. If as a Diet, give two, three, four, fix, eight or tendrops at a time, four, five or fix times a day, in Beer, Ale or Wine, according as the fick is in Age and Strength.

XV. If it be given with an intention to purge, give to Infants (quoad capax) from five to twenty drops. To Children of four, fix, eight, ten or twelve years of Age, from forty or fifty drops. To Youth, from ten to fixteen years of Age, from fifty to eighty

Tt 2 drops.

drops. From fixteen or eighteen to forty. fifty or fixty years of Age, from a hundred and twenty to a hundred and fixty or two hundred drops; which is from about four fcruples, to a drachm and by f, or two drachms: always observing this, to increase the dose every time, till you find it works enough.

XVI Give it in Broth, Beer, Ale, or Wine, and that every fourth, fifth, or fixth day, in the morning fasting; having some broth, mace Ale, or Posserdrink to take after it: being mixt with its vehicle, no stomach can refuse it. One ounce will make four, fix, eight or ten several doses, according to the sex, years, and strength of the Patient. Price sive shillings an ounce.

# CHAP. IV.

Tinctura Corallorum composita, Compound Tincture of Coral.

o Director

I. T Ake levigated powder of Coral, affuse thereon most fharp Spirit of Honey (made of Honey p. j. sand p. ij. distilled in a sand Furnace) and in twenty four hours the Spirit will be tinged of a deep yellow: decant, and put on more Spirit of Honey, and digest as before, reiterating this till it will tinge no more: then fifter the Tinttures, and gen ly distill off the Spirit to dryness: upon the dry matter put the best restissed Spirit of Wine, which digest till it is red: decant and put on fresh, digesting to dryness as before; this reiterate till all the tintture is extrasted. Filtrate these tintures, and abstract the Spirit by distillation; then upon the magma affuse new Spirit of Wine, so will you have a pure tinture, as deep as the reddest Wine and throughly transparent. 2. Take a quarter (of the weights)

# Chap. 4. Tinctura Corallorum composita. 645

Coral) of pure Oriental Bezoar: Levigure is into a most subtil powder, and make a strong siniture thereof, in the same manner, as before you made the siniture of Coral. These two sinitures reserve. 3. Take an eight part (of the weight of Coral) of sufferen, and with the highest rettified Spirit of Wine extract a very strong and deep siniture in six or seven days, filtrate it, and then mix is with the reserved tiniture of Coral and Bezoar; dight and circulate twenty days, then filtrate it again through brown paper: so will you have a glorious transparent windture, and as red as Blood, which keep in a Glass close stopped for use.

II. Top may also otherwise extract a tintime of Coral, by digesting the levigated powder thereof in Oyl of Citrons or Limons, which being tinged, you may draw off the Oyl, and with the best rectified Spirit of Wine, or Spirit of Wine vitriodated (viz. by digesting equal parts of S.V. and Oyl of Vitriol together, and distilling in an Alembick in sand with a gentle sire, & then with a stronger that they may pass together, reiterating this thrice, and then circulating for forty days:) you may draw the pure red tintiure of Coral, for the pur-

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III. This compound tincture of Coral is so strong and powerful, that it takes away all Impurities from the blood whatsoever, is a great Cordial, and of Wonderfull Virtue against all diseases proceeding of putrefaction, being used for some days: it is so wonderfull an enemy to putrefaction, that it is scarcely possible for any impurity to remain in the blood.

IV. It is a great Vulnerary and Traumatick, curing all curable wounds at once dreffing, and therefore is of extraordinary use in spitting of blood, especially if it be caused from the rupture of a Vein: it revives the Spirits, cheers the heart, and mightily restores in

Confumptions.

V. It is of fingular use in burning and malionant T t 3 fevers

Severs, as the Meatles, final Pow Calenture, footred Fevet and the Plague, being as it were a ballom of life and vital powers, exalting nature to her higher degree, by quickning the narive fire and hear.

VI. It is of good use in Hecticks, rectifies differn pers of the head, cures Apoptexies, Epilepfies, Convultions. Lethardies Vertigo's and firth like? If prevails also against diseases of the Romach and heart. is in digestion, want of Appenie; Loathing, Womiting, Fainting Swooning, Palpitation, fickness of heart, and melancholy habit and disposition of body.

VII. It is to great a de-obstructer, that it cures the Rickers in Children their joynes also being bathed with Powers of Amber) and is found by experience to be admirable to comfort and warm the Stomach and Womb and to cure a Chloroffs of Green fickness.

and Cachexia.

VIII. And as it extinguishes the preternatural lieat of Fevers; so also is comforts the natural powers. restores the radical moisture, fortifies the Spirits, and gives relief in Deliriams, Frenzy, Madnels, Obstructions of the Terms, Wind in the bowels and Womb. Sec.

IX. The dose and way of taking of it. You may give from ten drops, to twenty, thirty or forty, as the fick is in years and strength: and you may give it in white Wine, Sherry, or Canary, or in any proper Cordi-al water; and that three, four, five or fix times a day, as you tee occasion. Price two shillings fix pence an ounce.

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## CHAP. V.

Tinctura ftomachica nostra; Our ftomachick tincture.

I T Ake tintlure of Salt of Tartar, tintlure of Antimony, of each a pound: black Pepper in fine Pounder eight ounces: Cardamoms in pouder two ownces: digeft them in the Said tintlures for forty days in a Glass close floot, shaking it once or twice every day, then being well settled, decant the clear Liquor, which siltrate through brown paper; so will you have a glorious, transparent, blood red sintlure, of almost infinite Virtues, which keep in a Glass close stops for Use.

II. This tincture receives its name from its admirable property of warming, comforting, and strengthning the stomach, taking away stomach-sickness, and pains there, loathing, vomiting, indigestion, want of appetite, and wind in the same, and parts adja-

cent:

III. It is a most excellent thing to sweeten the blood, open all obstructions of the inward parts, as of the Liver, Spleen, Lungs, Womb, Reins, and Bladder. It brings down the Terms obstructed, and is powerful against the Green-sickness, Dropsie, Jaundice, Consumption, Asthma, Pleurisie, Melancholy, Ulcers inward and outward, Scabs, and other Breakings out.

IV. It is of admirable use against all sorts of Fevers, continual, putrid, and Pestilential, as Measles, small Pox, spotted Fever and Calenture; it expresses the exorbitance of the Fever, takes away all the Symptoms, or causes rest and ease. It is singular against the Plague, and all other diseases arising from sharp-

Tt4

ness and obstructions of the humours, or stagnation of

the Blood.

V. It is an excellent remedy in all cases of putrefaction of the Blood and humours; prevails against Rheumatisms and Gouts, cuts tough slegm, and dissolves Tartarous matter, loging in the Ventricle; it is good against sighing and sadness, pains and stitches in the sides, and helps Trembling and Palpitation of the heart.

VI. As this tincture is a notable Aperitive, so it works all its effects powerfully, yet with a World of sweetness and pleasure; it opens obstructions in the Pancreas, Mesentery, and Meseraick Veins, dissolves the stagnation of the Blood, and all the most tenacious Viscosities wheresoever in any part of the body, inost potently provoking the Terms, if given for some

days according to Art.

VII. It provokes Urine, and is good against Gravel, Slime, and Viscous matter both in Reins and Bladder, purifying the whole Mass of Blood, and taking away the malignity of the humours, in any difease whatsoever, especially in the Kings Evil, scirrhose and Leprose tumours, &c. in so much that there is scarcely the like general remedy in the whole Art of Physick.

VIII. It hastens and facilitates the Birth, and brings away the Secundine or after-birth, yea the child although dead. It is a present remedy against the Colick and after pains, as also in the Gripings of the Guts and Bowels, more especially if it be mixt with equal parts of our Gutta Vice, or Cordial drops.

IX. I cured with this tincture a certain woman of an inveterate pining and wasting, a supposed incurable Consumption, accompanied with vehement dolors of the bowels, after a two years despair, when she

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was fo weak she could not stand alone without two to hold her, looking like (as it were) the picture of Death, and given over as past hopes, by several able and learned Men.

X. She alone taking of this medicine in Sack, or Milk, or Ale fweethed, but most commonly in Milk, morning, noon, and night, and fometimes five or fix times a day (drinking no drink without it) for about a month or five weeks time, restored her

to the wonder of all that knew her!

XI. The dose of it is, so much as will make the Vehicle as hot as the sick can well endure it: you may give from ten drops to twenty, thirty or more, as you see occasion viz. five, six or seventimes a day. It may also be given in some proper Syrup or Julep. Price two shillings an ounce.

### CHAP. VI.

Tinctura Bezoartica nostra; Our Cordial or Bezoartick

I. T Ake Carpobalsamum eight onnces: Virginean snakeroot, Contrayerva, Zedoary, biting Cinnamon, Winters bark, Bayberries, of each four ounces: Cloves, Mase,
Nutmegs, Opium, of each one onnce: Saffron, Cochenele,
Ginger, of each half an ounce, bruise what are to be bruised,
and affuse thereour estified Spirit of Wine a Gallon: digest
twenty days, shaking it two or three times a day; then leating it well settle, decant the pure clear tineture, in which dissolve Camphir two ounces i keep it in a Gtass close stops for
use. Tou may if you please prepare it with tineture of Salt
of Tartar instead of the resting ed Spirit of Wine, and it will.

he yes more excellent and poncyful, but a great deal the

II. This tincture is Cephalick, flomachick, Cardiack and Hysterick; also sudorifick, carminative. alexinharmick diuretick, and Amodyne. It is a notable Antitebrieick, and powerfully relifts the force of ourning malignant, and peltilential Fevers, as the Fever Genfor mealles, final Pox, Purples, Spotted Fever Calenture, sweating fickness and Plague.

III. It is fingularly good against hypohendriack Meknocholy. Quartans, or other Chronick difertes of like kinds it is an Antidote against all forts of Poylons. the bitings of mad Dogs, Serpents, Vipers, and other Venomous creatures: and is good to kill worms in

Children

IV. It mightily strengthens and comforts the animal Spirits, fortifies the Brain, and cures all difeases thereof, proceeding from cold and moisture. or a flux of flegmatick and viscous humours to the fame, as the Apoplexy, Falling-fickness, Lethargy, Carus, drowfinels, dulness, deepinels, Headachs, Megrims, Vertigoes, Conventions, Palfies, and other diseases of like kind.

V. Drawn up the Nostrils it gently purges and cleanses the Head of cold, moilt and pituitous humours and makes a great evacuation by the Pallat and Nofe, and so used (as well as taken inwardly) it is very profitable against all the aforenamed difeases

of the Head.

VI. It revives and reftores the Vical Spiries, chears the heart, strengthens the bowels, revives languishing. nature, and fortifies the whole body: It is excellent good in Confumptions, heoticks, faintings, tremblings. Palpitation of the heart, with other Cardiack passions VILLE marvelloufly frengthens the Romach. warms

and

and comforts it, provokes Appetite, helps Digeltion, and takes away naufcoufness, loathing and Vomiting; and is of fingular good are for such as are affected with a vehement pain in that bower with a month.

VIII. It is profitable against hits of the Mother, fainting and Swooning, it cleanses, warms, confirms and strengthens the wombs and being after and long taken by Barren Women, who are of a forticold and most constitution, it takes away that indifferent

tion, and causes fruitfulness

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IX. It provokes (weat powenfully, and expells all manner of Venom, poylon, and malignity through the pores of the skip. It expells Wind from all parts of the body, yea, from the Veins and Arceries, it gives prefent cale in the Colink. Griping and Wind in the Itomach and bowels, and refreshes all the Viscera.

X. It provokes Urine and the Terms, facilitates both birth and after birth, takes away after pains in Child bed Women, clears the vaffages of the Drine, and the pains the Reins.

theters, and Bladder.

XI. The defe and may of taking it. As a preferoative you may take half a spoonful or something less of it in the morning falling; a little before dinner; and last at night going to bed. Conaisuely, give it when, and as often as the exigence requires; and if it be the Plague, or any other malign Fever, let the fick be in bed, and well covered; then give it from half a spoonful to a Spoonful, in a Glass of Sack, burnt White Wine, or some proper Julep; reiterate it in like manner for three or sour days at least; and after give half a spoonful every morning and night. For fainting, Swooning, &c. give it at the time of the Fig. Price six pence an ounce.

C H A P.

# CHAP. VII.

Tinctura Hysterica, Our Tincture against Fits.

I Take powers of Amber five pints: Castoreum in fine powder, hoose hoose, or Ox horns rasped, of each fix owners: mix and dipest forty days in a warm Balneo Marix, shaking the Glass two or three times a day: then being settled, decant the clear tincture, and keep it for use. You may make this tincture also, with tincture of Salt of Tartar, or tincture of Antimony, as you please your self.

II. This was invented against those called Hysterick Fits; vic. Suffocation, or Fits of the Mother, for which it is a most admirable thing (and has indeed scarcely any

equal.)

III. It is not only of wonderfull force against Fits of the Mother, but also against the Colick, Wind, Vertigo, Megrim, Falling-siekness, Palsie, Apoplexie, Trembling, Palpitation of the heart, Carus, Lethargy, obstructions and weaknesses of the Head, Brain, Nerves and Womb.

IV. It quickens the Senses, revives the Spirits, attenuates, opens, discusses, strengthens, results poylon, provokes Urine and the Terms: being held in the mouth, it helps the tooth-ach, and being taken inwardly, or outwardly bathed with, it is a most ad-

mirable thing to ease pains.

V. It is a most powerful thing to cause sweat, and as good a sudorifick as is ordinarily to be met with, expelling Tartarous diseases, as the Scurvy, Pox, Dropsy, Jaundice, Gout, Rheumatism, &c. It expells Wind in any part, and by its balfamick virtue relists putrefaction, expelling the Malignity of the Measles,

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Meafles, fmall Pox, spotted fever, Plague, Poyson,

biring of mad Dogs, &cc.

VI It is found by experience to open the most inveterate obstructions of the Womb, and Melentery, as also of the Liver, Spleen and Bowels, and therefore is profitably given in the Cachexia, green sickness in Virgins, Rickets in Children, as also to kill

worms whether in old or young.

VII. The dese and manner of taking it. You may give it in White or Rhenish-wine, or in Sherry or Canary, according to the intention; or in any proper Syrup, or Julep: give it out of the Fit, in the morning fasting, and last at night going to bed: but if any Fit comes, give it in the time of the Fit. The dose is from twenty drops to forty, sixty or more, according to age and strength. Price eight pence an ounce.

### CHAP. VIII.

Tinctura cathartica nost. Our purging Tincture.

I. The the best rectified Spirit of Wine sive quarts choice Sena twenty ownces: Powder of Jalap sive ownces: mix them, and digest in a warm Balneo Marix eight or ten days, shaking the Glass two or three times a day: then being settled, decant the clear tincture for use. This sincture may also be made with tincture of Salt of Tartar, or tincture of Antimnoy.

II. It is an exceeding good thing against all Chronick, hypochondriack dileases, as Dropsies, Jaundices, Scurvy, Gout, and head-achs, Megrims, Vertigo's lethargies, dullness, and drousiness, and other cold and

moist distempers of the head and brain.

III. It powerfully opens obstructions, and takes away pains of the Liver, Spleen, Metentery and womb;

womber is good against mankousness, Loating and Vomiting, and cleanses a foul trongers, cleaning and com-

fortingall those parts.

LV. It cures Couts, Rheumarifins, Kings wil, Cachesia and other flubborn and rebellious distalles it prevails powerfully against loathing in Wirghs, the green fickness, and other like differences incident to that fex, and to admirably takes them away, that they never return again.

difficulty and chronick differes, and is profitably given in the Pox, Gonorrhoea, Scabs, Deprofites, Morphew, old and running fores, Ulcers Fiftheres, Hypochondriack Melancholy, and other like invergence and mail-

lign diseases.

VI. It takes away the causes in Fits of the Mother, and is so great a thing against the Scurvy, that it has but sew equals: for it purges admirably, and powerfully evacuates all watery humours by stool, after a pleasant and wonderful manner.

VII. It purges all humours even to a Miracle, but chiefly fuch as are watery, things vifcous, and Melancholy, and is of exceeding rife to fuch as are fichy, mangy, or Leprons, or have old filthy running fores about them, especially in the Leggs, and parts depending. It removes Scabs, and Venereal botches, and mightily facilitates the cure of the French Pox, being given after the µse of Mercurials.

VIII. It provokes Urine, and potently brings away whatever obstructs the passages of the Urine in the Reins, Ureters or Bladder, as Gravel, sand, Sline, and viscous humours. It also empties the stomach and bowels of all their filth, cleantes like soap, and per-

forms even desperate Cures.

IX. The

IX. The dofe and manner of raking it. You may give of it from half a spoonful, to a spoonful, two spoonfuls, or more, as you see occasion, respecting also the Age and strength of the Sick: to Children and weak persons, you must give but a small dose; to elder and stronger persons a greater: give it in a Glass of Ale or White-wine sweetnedwith Sugar, or mix it with a little Syrup, and so take it. Let it be given in the morning fasting, drinking warm broth, mace-Ale or possectionink after it, and keeping warm as in taking other Purges: and let it be repeated twice a week or more as need requires. Price six pence an same.

## CHAP. IX.

Guttæ vitæ noftræ , Om cordial Drops.

Ake the best Tartarized Spirit of Wine or tinchere of Salt of Tartar or tincture of Antimony, five quarts; Or take Powers of Cloves Carraways, Anifeeds, Limons and Rosemary of each a quarumix them together and put it in five Gluffes holding somewhat more than a quart a piece into each Glass a quart. Into the first Glass put Theban Opium eight onness, dissolved in a part of the same Powers. Into the Second Glass put Saffron and Cochinele the latter in fine ponder ) of each one ounce. Into the third put Castoreum, freed from skins and fat, and reduced into powder, two ounces. Into the fourth put Cloves and Nutmegs in powder, of each an ounce. Into the fifth put Virginean (nakeroot bruised. Zedoary in gross powder, of each one ounce: Digest all several a month in a place neither hot norcold, shaking them twice a day. Then let the Opium stand three days without shaking (as also the tincture of Saffron, &c. ) Decant the clear Opiate tincture into a great Glass' holding about fix quarts, which reserve. To the Magma of the Opium, put the clear 656

clear decanted tincture of Saffron, shake them well together twice a day for three days, then let the Glass stand, (as also the third Glass containing the tincture of Castor) three days without shaking; after which decant the clear tin-Eture of the Saffron from the Opiate Magma, and put it to the tincture of Opium in the great Glass. To the Opiate Magma put the clear decanted tincture of Castor. which shake well together twice a day for three days; then let the Glass stand (as also the fourth Glass containing the tincture of Cloves &c. ) three days, without Chaking; after which decant the clear tincture of the Caftor, and put it to the tincture of Opium in the great Glass as aforesaid. To the Opiate Magma put the clear decanted tincture of Cloves, which shake well together twice a day for three days; then let the Glass stand ( as also the fifth Glass containing the tincture of Virginan Snakeroot, &c. ) three days without shaking; after which decant the clear tineture of Cloves, and put it to the tineture of Opium in the great Glass, as before. Laftly to the Opiate Magma, put the clear decanted tineture of Virginean Snakerost, which shake together twice a day for three days; then let it stand three days without shaking; decam the clear tineture, and put it to the former, the which keep in a glass close stopped. In this mixt tincture diffolve Narcotick Sulphur of Vitriol one ounce : choice Camphir two ounces : shake them, digest ten days, and keep the whole in a Gluss bottle, clost stopt for use.

If. This medicament is as well as a prefervative from, a cure for, all pestilential and infectious diseases: it preserves health, represses Melancholy, causes chearfulness, and cures the bitings or stingings of any Mad Dog, Serpent, Viper, or other poysonous creations.

ture, and powerfully expells poy fon.

III. It cures the Vertigo, Epilepfy, Apoplexy, Palfy, Trembling, Depravation of the Senses, Frenzy, Madness, want of Sleep and Rest, inveterate pains of

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the Head, Megrim, sudain Coughs, Colds, Asthma's, difficulty of breathing, bleeding in any part, Spitting of Blood, sickness at stomach, Palpitation, swooning,

and other passions of the heart.

IV. It is a most admirable thing against the Colick, Griping of the Guts, Wind, pain of the stomach and Spleen, Iliack passion, sharp & corroding humours in the bowels, and all other pains whatsoever: It cures a Diarrhoea, Dysenteria, and Lienteria, the flux of the Liver, overslowing of the Terms, and Whites in Women: and is a famous remedy to prevent miscariage.

V. It is of good use against Scabs, Pfora, Leprosie and Elephantiasis, by taking away the acrimony of the humours, sweetning the Blood, & expelling the filth and malignity thereof through the Pores of the skin; for it powerfully provokes sweat, being taken

last at night going to bed.

VI. It chears the heart, revives the Spirits, makes a glad Soul, strengthens the whole Body, comforts the stomach, helps Appetite and indigestion, removes Languishing, corroborates the faculties, restores wastings, and decays of Nature, is profitable against 1 inning, and cures a lingring Consumption, if taken in due time, or before the Patient is past cure.

VII. It is so good a thing against spitting of blood, pissing of blood, bleeding at the Nose, and all other staxes of blood in any part of the Body, that there is scarcely any thing superiour to it &, therefore is found to be profitable in all Consumptive weaknesses,

Phthifick, Ulcers, of the Lungs, &c.

VIII. It is good against the Stone and Gravel, slime, filth, and viscous humours in the Reins, Ureters and Bladder, for it gives present ease and rest, provokes Urine, and takes away the heat and sharpness thereof; cures the Dysuria, Ischuria, and strangury, helps

Ulcers of the Bladder, frengthensthe Genitals, and and after an admirable manner, affilts and fortifies

nature.

IX. I have given these Drops in the Measles and small Pox with singular advantages; I have given them to near two bundred Children in the small Pox, as also to elder persons both Men and Women, and always with so good success, that no one has yet dy dunder my Hand of those distempers, who have affections taken them according to my order and directions.

X. They are of most excellent use for all such as are troubled with Gouts, whether in hands. Armes, Hips, Knees, Leggs or seet; as also for all such as are afflicted with vehement and painfull Rheumatisms, pains from the Scurvy, or Pox, Sciatica's, Quartan Agues, and other Melancholy, cold and moist diseases arising from sharp, Vitious, and Tartarous

humours: they give ease upon the Spot.

XI. They are also very powerful in many affects of the Womb; they cure weaknesses, whites, Gonorrhoeas, and other Lassitudes of those parts, after due purging. They prevail against all vehement pains of the sides, stitches, Pleurisies, and such as languish from poysons formerly given, labour under

Hecticks, and the most intolerable pains.

XII. These Cordial drops restore radical moisture, comforting every member and part of Mans Body: they cure the tooth-ach, and Pains in the Ears, and the like, being held in the mouth, and dropt into the pained Ear. They are also an excellent remedy against vehement Vomiting, stopping it in an Instant, whether it proceeds from wind, cold, sharp humours, or surfeits.

XIII They area prefervative from and cure of the Plague,

Plague, Pestilence, spotted Feaver, Calenture, or any other like infectious disease; and being infected they are a remedy beyond expectation; for they perform their operations (which is chiefly by sweat, and sometimes by Urine) with great safety, speed, dexterity, and eale, being sitted for any person of what age, sex, or quality soever, strengthning the brain, chearing the heart, comforting nature, restoring the Body, and reviving all the Spirits, Natural, Vital, and

Animal.

XIV. The quantity to be taken at a time. This is to be regulared according to the age of the fick; to a Child of a month, quarter, half-year, or year old, you may give from five drops to ten: from a year to two, three, four, or five years old, you may give from ten to fixteen drops: and to elder persons from fix or seven years of Age to twelve or fourteen, you may give from fixteen to twenty four drops: from 14 years of Age to twenty, thirty, forty, sixty, eighty years and upwards, you may give from twenty four to forty, fifty, or sixty drops at a time, which in ordinary cases may be the highest dose; and may be safely given to women with Child, being excellent to prevent miscarriage as aforesaid.

XV. The dose and manner of taking them. Let them always be taken at night going to bed, and that also every night, if need requires: and let them be exhibited in Canary, or white Wine and Sugar, Mace-ale, or the like; or you may give them in a little syrup, or some proper Julep, and so to be covered down, and to rest upon them. If they be taken for a Cough which is troublesome in the day time, or for prevention of any illness, let them be taken in the morning sasting in a Glass of sack, and you need fear no

hure that day. Price two (killings the ownice.

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### CHAP. X.

Tinctura Martis: Tincture or Extract of Steel.

Molve filings of Steel in Oyl of Vitriol one part, mixed with Water two parts: filter it bot and crystalize: exficcate the Crystals, stirring them continually, so have you a purple Crocus: extract therefrom a Tineture with distilled Vinegar; then in Balneo Maria abstract the Vinegar, and edulcorate the remainder, by often drawing from it fair Water, and extract with Spirit of Wine.

II. Or thus: Diffolve Filings of Steel in purified juice of Limons, digest for a Month, then filter into a glass Vellel, and in a Sand heat inspillate to the consistence of a

liquid Extract.

III. Or thus: Take Filings of Steel one pound: Sal Armoniaek two pound: mix and distil in a Retort, with a gentle Fire at first, then with a stronger: the Magma remaining edulcorate by much washing: then put it into a Cucurbit, and with Spirit of Wine extract a Tineture : decant and put on new Spirit, till the Magma will yield no more Tincture; then abstract the half of the Spirit by an Alembick, and the Tincture remaining filtrate through brown Paper and keep it for use.

IV. Or thus: Take reverberated Filings of Mars one pound: dutcified Spirit of Nitre three pounds: digest them together for two days, or till the Spirit is tinged of a rubi-

eund colour; decant and keep it for use.

V. Or thus: Take filings of Mars a pound: fair Water eight ounces: Oyl of Salt one ounce: digest all together two or three days, firring the matter twice a day: then add Crystals of Tartar three ounces, mixed by degrees with a Sufficient

Sufficient quantity of Spring Water; boyl all for two hours. in an iron Pot, always adding fresh Water, as the other evaporates. Being settled, filtrate the clear, and evaporate to the consistence of a thin grup; add a half part of recti-

fied Spirit of Wine, and keep the Tincture for ufe.

VI. Or thus: Take ruft of Iron made by dem, twelve ounces: white Tartar two pounds: powder and mix them together, boyl them in a great iron Pot, with two gallons of rain Water for twelve bours: ftir with an iron Spatula from time to time, and put in more Water (but boyling bot ) as the former consumes : at length let it settle a while, so have you a black Liquor, which is the Tineture. Filtrate and evaporate it in an earthen Pan over a fand heat. to the thickness of a Syrup, or till a pellicule shall arife.

VII. All these preparations of Steel are singularly good, fo that there is scarcely any preference; but if one may make an Estimate, the third and sixth Recipe's are thought to have the precedence, the one being a pure red Tincture; the other a noble Extract, of an admirable fweetness in its tast, being reduced to fuch a thickness that it might keep the tetter; but both the prescripts, yea all of them are

of one and the same vertue.

VIII. The Tincture or Extract of Steel, is a very great Aperitive, opens the most inveterate Obstructions of the Liver, Spleen, Pancreas, Mesentery, Reins and Womb; is a most excellent thing against Cachexies, Dropfies, Stoppage of the Terms, for it sweetens the acid humor, which is the cause of all

Obstructions.

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IX. It is a perfect cure for the green Sickness in Virgins, Rickets in Children, Quartan Agues, and h/pochondriack Melancholy, for which last, there is scarcely any greater Remedy: It cures the Scurvy,

and takes away a Schirrhus both of Liver and spleen. It is said also to be a specifick against the Jaundice,

Black and Yellow, Dropfies and Kings Evil-

X. It takes away all Obstructions of the Reins, Ureters and Bladder. It is a powerful Remedy, and has a fingular property to attenuate Atra bilis and Melancholy. And in all deplorable Diseases proceeding from corruption of Humors, it is a most admirable Remedy. It rectifies the Stomach, and sets it to rights, which is the root of most diseases afflicting Mankind.

XI. It frengthens all the internal Viscera, disfolves all coagulated Humours and tartarous matter, and has been found profitable against Rheumatisms, Gouts, the Stone, and other tartarous Diseases af-

flicting the Liver, Spleen or Mefentery.

XII. Is temperates the acimony of acid humors, and performs all the Cures aforefaid, when all other Remedies are ineffectual: moreover it is known to be a specifick for killing Worms in Children. Tis indeed a noble Medicament, beyond thoulands of

others.

XIII. The Dose and way of using it. The Tinctures may be given from fix drops to twenty, and if they be given in a greater Dose, as from half a drachm to a drachm, they move to vomit, expelling both Choler and Flegm: the best way is to begin with six or eight drops, and so to increase two drops every day, till it moves to Vomit. The last prescript may be given from half a drachm to a drachm. Let them be given in Beer, Ale, Wine, or some convenient Syrup, every morning fasting. Price and Shilling for pence an Onuce.

# CHAP. XI.

Spiritus Nitri Alchoolizatus : Alchoolifed Spirit of

I Take relitified Spirit of Niter half a pound: of the best relitified Spirit of Wine a pound: mix them together, and digest for forty days: then put them into a glass Retort with a long neck in Sand, applying a very capacious Receiver, and distill to dryness; first with a very gentle Fire, for otherwise much of the volatile Spirit will be lost; afterwards with a stronger, till all be Spirit became over. The Vessel being cooled, cohobate the distilled Spirit, and repeat the cohobation three or four times in like manner. So have you a Spirit most wonderfully volatile, and most fragrant and odoriferous, which keep in a Glass very close store for mse; being taken pro Circulato majori Paracelsi.

II. This is the highest Volatile acid in the whole Republick of Medicine, penetrating in a very short space the whole human Body from Head to Foot, and therefore is profitable in almost infinite Diseases,

being a powerful accenuator and incider.

III. It is a most admirable Diuretick, inferiour to no other Medicament, for it powerfully provokes Urine, and opens all Obstructions in the Reins, Ureters and Bladder; and expels from all those parts Stones, Sand or Gravel, Slime and other Tartarous Matter. And I am perswaded from the experience I have had thereof, That it transcends all other Medicines in breaking of the Stone; and that if such a thing be possible to be done by any Medicine, It may be done by this.

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IV. It is a great Alexipharmick, and refifts putrefaction in the highest degree, it cures the Plague and all manner of putrid, malign and pestilential Feavers, driving the Poyson and malignity of the Disease from the Heart, and expelling it through the Pores of the Skin by Sweat.

V. It is a most admirable Febrifuge, extinguishes the preternatural heat of all burning Feavers, takes away all their evil Symptoms, and famously quenches Thirst: and therefore is profitable in all great Inflammations in any part of the Body, but chiefly of

the Lunes.

VI. As the Medicine is highly acute, fo it as mightily conduces to the cure of many chronick Dileafes, as the Scurvy, Cachexy, Dropfie, Jaundice, Quartans, hypochondriack Melancholy, Herpes, Scabs, Itch, Leprofie, and other malign eruptions of the Skin; prevailing also against several inveterate Diseases of the Head and Brain.

VII. It opens Obstructions in all parts of the Body, almost to a Miracle; so that setting aside the Tincture of Steel, there is not a greater deobstructer in the World: It is good in Peripreumonia's, and most other Diseases of the Breast and Lungs, as Coughs, Colds, Asthma's, shortness of Breath, Wheazing, difficulty of Breathing and such like.

VIII. It is a great Antipleuretick, and by the relation of some Physicians which have used it in that case, a most famous Medicine against that Disease. It is resolutive, discussive, sudorifick, Alexipharmick and Anodyne, takes away the unnatural Fermentation of Humors, and is a great specifick in the Colick, being given in a little Cinamon-Water, or fair Water, and also mixed with a little Oyl of Nutmegs and Civet, and anointed on the Navil.

IX. It

Chap. 12. Spiritus Anodynus noft. 665

IX. It is good in Gargarisms and Lotions, to stop Gangreens, take away rotten Flesh, Corns, Warts, as also to heal Cankers, Sores and Ulcers in the Mouth and other parts. It is preferable before A.F. for making Fucuses for the Face, being clear and delicate, whereas those made with A.F. rather blacken

than whiten it.

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X. The Dose and way of using it. You may give it from ten to twenty drops, two scruples or a drachin, according to the occasion and necessity: it may be taken in Beer, Ale, Mead, Wine, Water or Syrup. If it be given all day long in all that the fick Drinks, you may give it from ten drops to twenty or twenty five, as need requires. Otherwise give it Morning, Noon and Night, from half a drachin to a drachin, in the vehicles aforesaid. Price two Shiplings six pence an ounce.

### CHAP. XII.

Spiritus Anodynus noster. Our Spirit easing Pain.

I. Ake powers of Amber, or of Limons, or of Amfeeds, a gallon: Thebian Opium eight ounces: thoice Camphir fix ounces: disolve the Opium and extract the Tincture thereof with the powers first, which being very clear settled, decant off into another Glass, and if you please filter it: in this clear Tincture dissolve the Camphir, by degrees by grinding it in a pure clean glass Mortar, then mix all together, and keep it for use.

II. This Medicine receives its name from the admirable faculty which it has of easing Pain, in any part of the Body: and this it performs as well by outward application, as by inwardly taking of it,

or upon occasion by both these ways together. It. It gives immediate ease in all intolerable pains of the Head, as the Headach, whether new or old, Megrim and pains in the Teeth and Ears; as also pains in the Nose and roof of the Mouth, although proceeding from the French Pox: and this it does by barely bathing the places affected therewith twice a day, and applying a cloth thereon, dipped in the same.

IV. It eafes pains in the Neck, Convillions, Cramp, and fuch like, though never to vehement, in any part of the Body, as all offinches and pains in the Stomach and Sides, the Pleurifie and baffard Pleurifie, pains in Womens Breafts coming from Gold, or Milk curdled, or from Blows, &c. by bathing the faid afflicted parts therewith two or three

times a day as aforesaid.

V. It gives ease in all intolerable pains in the Sholders, Arms, Hands, Fingers, or joynts of those parts, proceeding from cold and moliture, or from Blows or Strains, or the Gout, or French Pox, or any tartarous matter lodged in the part.

VI. It is of fingular use in Gangreens, to both withal, twice a day at least: for if the Mortification be not compleat, it presently retrieves it, calling back again the bassled Spirits; and secures the part

against any future assaults of the Disease.

VII. In all manner of vehement pains of the Bowels and Belly, Convulsions of the Mesentery, the Cholick, griping of the Guts, Wind, &c. as also in all manner of After-pains in Women in Childbed, there is no greater, speedier nor more admirable a Remedy; for in these causes it gives relief almost in a moment; by well bathing the part, and applying over the parts a Flannel well warmed and moistned

Chap. 12. Spiritus Anodynus nost.

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in the same, with repetition of the bathing at least two or three times a day, according as you see need

require.

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VIII. In all manner of pains of the Hips, Thighs, Knees, Leggs, Shinbones, Ankles, Feet and Toes, coming from extream weakness, bruises, falls, blows, strains, colds, definxions of humors, tumors or any tartarous matter or gelly in the Joyats, or proceeding from the French Pox, the Scurvy, a Rhenmarism Cramp or Gout, &c. there is no more present Remedy, than by barhing the said parts, two, three, or more times a day, with this our Anodyne Spirit.

IX. It is an admirable thing in all weaknesses of the loynts, the Rickets in Children, and venement pains in the back, whether of Men or Women, as also for the Stone, Sand Gravel or Slime, and venement pain in the Yard in making of Water, by bathing therewith, and injecting it into the Yard with a Syringe, being first mixed with a little Wa-

ter.

X. The Doje and manner of raking it inwardly. In all the aforesaid Diseases it will be of mighty confequence to take it inwardly, for being so taken also, it performs the work to a miracle. The Dose is exactly the same with the Gatte Vite in the former Chapter, to which I refer you. And you may take it also after the same manner, at the same times, and in the same vehicles, chiefly at Night going to Bed. Price twelve Pence an onnce.

de alle es the Birth and cleans. His Womb,

### CHAP. XIII.

Spiritus Aperiens noster. Our opening Spirit.

I. The the best rectified spirit of Wine such as will fire Gun-powder, a quart: the best Oyl of Sulphur per Campanam, Oyl of Vitriol, Golden Oyl of Salt, of each six amous: mix the Oyls fift together, then mix them with the spirit of Wine by little and little till all is put in: shake all wells together, digest for three months, then distil in a glass Alembick or Cucurbit, with a very gentle and gradual sire, that the subtil and volatile spirit only may come over, leaving a thick magma at bottom, of the substance of Honey, or consistence of a soft extract. In this distillation you must be cautious that your fire be not too great, for if it be, it will sorce over all the Magma or faces with the Spirit, and then your labour will be lost, and all your work spoiled.

II. This Spirit is of most subtil and volatile Parts, and a Specifick in all diseases of the Brain whatsoever, as well as in diseases of the Stomach, Lungs, Liver, Spleen, Reins, Bladder and Womb. It is a Specifick not only against the Stone whether in the Reins of Bladder, which by the affiduous use of it, it radically dissolves, but most powerfully opens all Obstructions in what part of the body soever.

III. It cures the Cuchexie and Chlorofis or Greenfickness, stops vomiting though never so violent, strengthens the Stomach to a miracle, provokes the Terms, sacilitates the Birth, and cleanses the Womb, and all its vessels from putrefaction and filth (from whence proceed Vapours, fits of the Mother, Swooning, and such like Diseases) beyond any other Medicine.

IV. And

IV. And as there is no more powerful remedy against the Stone and Gravel, in the Reins, Ureters, and Bladder: so no more excellent thing is known for the absolute cure of old and inveterate Head achs, Megrims, Vertigo's, Lethargies, Apoplexies, Palsies, Epilepsies, Convulsons, sits of the Mother, Gouts, and other like Neurotick diseases.

V. This Spirit comforts the Stomach, wonderfully abating all Inflammations, quenching Thirst, and repressing the heat of Feavers: it causes a good appetite, and takes away Cholerick and gross melancholy humours from the Stomach, Lungs, and Bowels, purifying the blood and resisting poylon and pur-

trefaction.

VI. It is a noble medicament and being taken inwardly, it cures Coughs, Colds, Afthma's, Phthificks, Ulcers of the Lungs, Confumptions, Rickets, Pleurifies, Stitches and pains of the fides. It opens all Obstructions of the Stomach, Lungs, Liver, Spleen, Bowels, Reins and Womb, sweetens and cleanses the mass of blood, radically cures the Scurvy, Cachexy, Cholick, and other ill habits of the Body.

VII. It is an excellent Traumatick and Vulnerary, and cures all manner of Sores, Ulcers, Fiftula's, Cancers, Scabs, Itch, Scurff, Morphew, Leprofy, and the like. It is an admirable thing used as a diet in the French Pox, being much beyond other drinks for the same purpose. And it also cures Green wounds.

for the most part, at once dressing.

VIII. It helps spiriting of Blood, it is good against Bruises, and prevents Gangrenes or mortifications: It is a most excellent thing indeed in the Gout, Rheumatisms, and most external pains, being bathed outwardly upon the place, morning, and evening, as as as taken inwardly by the following directions.

IX. It

IX. It cures the Scurvy to a miracle, is an excellent Aperitive and Diutetick, and a great cooler; it keeps the Body Coluble, cures continual Feavers and Agues, chiefly Tertians; it firengthens the Brain, Nerves, Muicles and Joynes, helps flootness of Breath and difficulty of Breathing; and being long and affiduously used, cures a confirmed Leprolie.

X. It is a very good thing in hectick Feavers, reflores radical moifture, extinguishes all preternatural heat, and acrimonious humors lodged in the Stontach, Bowels and Blood. There is nothing more powerful in expelling of Poylon, of what kind loever, and curing of the biring of mad-Dogs, Serpents, Vipers, or other venomous Creatures.

XI. It has a balfamick property, and renovates the whole Man, comforting and reftoring the Head, Heart and Stomach; it cuts, discusses and cleanses, is a specifick against the Dropsie, and all starulent, watry and tarterous Viscosity. It kills Worms, helps a languishing Stomack, is good in fits of the Mother, and is a wonderful thing against the infection of the Plague and other malign and pestilential Feavers, beyond almost all things yet known.

XII. The Dose and manner of taking it. You may take from ten drops to twenty, thirty, forty or fixty drops or more, in all the liquors you drink every day, whether Beer, Ale or Wine, observing the age of the person: when you begin to take it, drink no liquor without it for some Months. Price treelie

Pence an onnce.

### CHAP. XIV.

Spiritus Antialthmaticus noster. Our Spirit against Afth-

Ake Sal Armeniack a pound; Salt of Tartar a pound and half: Spring Water a pint, put all inm a Retort, and diffil in Sand, so have you first a volatile Salt, then a freet flegm: diffolve the Salt in the Phleom and referva it. 2. Take the Urine of a found man thirty pounds the best restified spirit of wine three pounds: let them ferment together for fix weeks, then add Salt of Tartar a yound : diffil by a Vefica; then rettify and dephlegmate the Spirit, and referve it alfo. 3. Take Harts-Horn sawed into small bits, as much as you please, put them into an earthon Retort luted, and diftil in a naked fire, fo have you first, a mater with a very thin Oyl : Secondly, a Spirit mich Kolatile Salt: Laftly a thick red Oyi very ftinking: the Spirit rectify in Sand per fe, till it is very subtil and pure. 4. Take of the first reserved Spirit of Sal-Arminch a pound: of the referved Spirit of Urine and Hartshorn, of each a quarter of a pound, mix them together, and unite them, by draming them over together in one distillation.

II. This is a great medicine indeed, and almost a Ranacea for most diseases, chiefly of the Head and Thorax, as Apoplexies, Epilepsies, Convulsions, Lethargies, Carus, Headach, Megrim, Vertigo, Deasness, Tooth-ach, pains and stitches in the sides, Pleurisies, Obstructions of the Lungs, Wheesings, shortness of breath, difficulty of breathing, Asthma's and the like, in which diseases it has hardly any su-

periour.

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III. In the Pleurily it is a real specifick, for it does that of it felf, which is otherwise performed by blood letting, and with as much freed and fecurity to the Patient, for it opens all the Obstructions of those parts, and takes away the stagnation of the blood.

IV. It sweetens the blood and humours, taking away their Acrimony, and unnatural Acidity; the chief cause of the Scurvy, Gout, Rheumatism, and Dropfy, in all which diseases it is a most admirable

specifick, and cures almost to a miracle.

V. It attenuates, incides, is Diuretick, Diaphoretick and resolutive, opening all manner of Obstructions in any part. It prevails in diseases of the Womb, as foulness and windyness of the Womb, Dropfy of the Womb, fits of the Mother, Obstructions of the Terms, Barrennels, &c.

VI. It is a certain remedy against Quartans, and is powerful against the Stone, Gravel Slime and viscous Matter whether in the Reins, Ureters, or Bladder: gives eafe in painful making of water, and cools any preternatural heat or Inflammation of those parts

VII. It takes away Flegm, and other Viscofities, obstructing the stomach, Breast and Lungs, even when life has been totally despaired of, raising the fick beyond all expectation: You may take it in a finall or weak lixivium of Salt of Tartar, impregnated with the tincture of the juyce of Liquorice, and fo you will find it exceeding good against Coughs, Colds, Wheefings, Afthma's, and all other like difeases of the Breatt, Lungs, Reins, and Bladder.

VIII. It is a wonderful piercing spirit, and is made fo much the more piercing from the Volatile Salt of Urine. It is a mighty thing against the Plague, Calenture, spotted Feaver, small Pox, and all forts of

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malian Feavers: particularly in the Colick, it cures to a wonder.

IX. It is of great use against the Rickets in Children, opening Obstructions, even of the Nerves, and therefore to profitable against Numbness, Lameness, Conts, Palsies, and such like. It quenches thirft, cools all practematural heats, purifies and loof-

ens the Blood, and kills Worms.

X. The Dose and manner of taking of it. You may take it from nine drops to twenty or more according to age and strength. To young Infants, you may give two or three drops; let it be given in Canary, or a good tincture of the juyce of Liquorice made in Spring Water. The Sick may take it every day for fome time, and that, in all the drink they take, at least five, fix or seven times a day: So taken, it causes a most excellent freedom of breathing, for which I here commend it to the world. Price two. Tolllings an onnce.

#### CHAP. XV.

Potestates Corns Cervi, Powers of Harts-horn.

I. A Ake a very Volatile Spirit of Harts-horn with IVI the best Spirit of Wine, put this upon fresh Spirit of Harts-horn, strongly impregnated with the Volatile Salt, draw off the Spirit, and Cohobate upon the remaining matter (if any be) seven times, so will you have a mast Sabtil Spirit impregnated strongly with the Volatile Salt: Take of this Spirit twenty ounces, of the Oyl of Hartsborn purely rectified five ounces, mix them together, and digest a month in a very gentle heat : then draw them of by distillation in a glass Alembick, in Balneo, so will they Xx

be perfectly united, and the Powers of Harts-horn will be intire, which keep in a Glass close stopt for use.

It. I had not inferted this medicament into this Book, had it not been for its admirable excellency in curing fits of the Mother, the which I have known it do in feveral persons, only by touching their Nostrik with two or three drops thereof: and in this disease it does that in two or three minutes time, which will not be done in some hours, by another Medicine: it brings out of the fit almost in a moment.

III. If the disease is vehement, and has been of long continuance, you will do well not only to touch the Nostrils with two or three drops thereof, but also to give two or three drops thereof inwardly in a glass of Sack; it has perfected the cure in several to

my knowledge in a few days taking thereof.

IV. It is of like virtue in repressing of Vapours in Old or Young, and taking away all such diseases which are caused thereby: it resists Hypochondriack melancholy, and cures stubborn Quartans, although of some years continuance, outwardly used and inwardly taken.

V. It is good outwardly in all cold Gouts, and Rheumatifins, in any old ach or pain, in an inveterate Sciatica, and in Nerves and Tendons strained, bruised, or otherwise hurt: and it retrieves a Gangreen (if the mortification be not compleat) in a few hours, and all this is done, only by bathing there

with, morning, noon, and night.

VI. Bathed upon the Part, it cures the bitings of mad Dogs, and other venemous Creatures, is good against Herpes, inveterate Scabs, and a Leprofy; it kills Worms; and the malignity of old Ulcers, Phagaden's, Kings Evil, &c. perfectly cures Cramps, and is of excellent use in Numbness, Lethargies, Palsies, and such like. VII. The

Chap. 161 Potestates Baccarum Juniperi. 675

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will, The Dose and manner of using it. It is for the most part used outwardly, by bathing the part of parts affected therewith two or three times a day, viz., morning, noon, and night: it pierces immediately, even to the Bone, neither wetting like Water, nor greating like Oyl. If you take it inwardly, (as it must be given sometimes) you may give it from three or sour drops to seven or eight either in a glass of Ganary, or in a pretty strong tincture of the Spanish juyce of Liquorice made in Spring water: you may give it either in, or presently after the sit, as also twice a day, viz. morning and night: for Worms, give a dram or two in a Clyster. Price two spillings six pence an awage.

### CHAP. XVI.

Potestates Baccarum Juniperi, Powers of Juniper Ber

I. T she funiper Berries forty pounds: bruise them well trains and all: assuse upon them a sufficient quantity of Rain Water, and with Sugar, Yest, &c. cause them to serment a being well sermented, distil therefrom a large quantity of suniper water, which Cohobate three or sour several times. This water rectify and make an inflammable Spirit, by separating from it all its slegm, which Spirit reserve. Take again forty pounds more of Berries, bruising them as before, putrify them in Rain Water for sorty days; till they become a kind of Mucilage, mix it with three times its quantity of Water, and distil it in a Copper Vesica timed within, so will the pure Osl ascend with the Water (in good quantity) and swim at the top thereof, which separate with a sunnel. From the Magma Calcin'd extract

X x 2

E Sale, which purify and volatilies: Mis the referved beirt with the Oct. and Volatile Sule, which perfectly unite by circulation and diffillation according to Art of these you the Powers of Janheer Berries very pure, clean, training sparent and Volatile, which keep in a glass slope fleet you allow

11. The Powers of Juniper Berries are of admirable use in the Colick, griping of the Gars, Wind, concretions of Sand of Gravel and slime artic Reins, Ureters, and Bladder: they ease vereined parts, and open all manner of Obstructions in those parts.

III. They powerfully provoke Unite, and are prevalent against all diteases proceeding from Wind in the Stomach or Bowels: they ease an afflicted stomach, comfort all the Viscera, and remove all the stoppages of the Liver and Spleen.

IV. I have known the use of these Powers, to cure a Scirrius of the Liver (one that might contwardly be selt of an eminent largeness) after other medicines had been used in vain: but the sick took them constantly (in all the liquor they drank) every that for a year.

V Many learned Phylicians have found by experience that they cure the Scurvy in a cold habit of body; and I know by my own experience, that they cure Althma's, Coughs, difficulty of Breathing, Wheeling, thortness of Breath, Hoariness, and other the like cold and moist diseases of the Lings.

VI. They are Cephalick, Stomatick, Pectoral, and Hyfferick; they cure cold and moift diffeates of the brain, as old Pituitous Headachs, Megriins, the Apoplexy, falling Sickness, Convultion, Cramp, Lethargy, Carus, Vertigo, &c. by outwardly bathing the Head or paris afflicted therewith, and also taking them inwardly.

VII. They

VII. They are good against fits of the Mother, facilitate both birth and After-birth, and repress vapors from the Womb, cleanfing, warming, and strengthening that part, and causing fruitfulness. Inwardly taken and outwardly applyed, they give present ease in after-pains, and wholly remove them.

VIII. They are profitable against Catarrhs, reful Poylon, prevail against the bitings of Serpents, mad Dogs, and other venemous Beatts, and mightily refift the Plague, and all other malign and perfilential They are also found to be lingular good adiseases.

gainst Gouts and Rheumanisms.

IX Outwardly being bathed therewith, they help coldness of the Limbs, Cramps, watery fwellings in the Hands and Legs, Numbries, Palifes, weakness of the Nerves and Muicles, as also old aches and pains, proceeding from cold, bruiles, or strains, &c.

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though never to vehement.

X. The Dose and way of using them. They may be given inwardly from twenty drops to thirty, forty or fifty drops, or more, according to the age, strength, and urgency of the occasion: If they be given to eafe pain, always mix them with an equal quantity of our Gutta vite in Chap. 9. aforegoing. They may be given in Canary or white White, or for want of them in Beer or Ale, and that three times a day, viz. bed; and tometimes ofther in extremity; continuing the same for some days or weeks: outwardly bath the parts affected with them morning and night. Price twetve pence an onnce.

X x 3

CHAP.

### CHAP. XVII.

Potestates Carui, Pomers of Caramays.

I. Y On are to make of these seeds (as before of Juniper Berries) 1. A pure rectified spirit free from all manner of slegm. 2. A subtil and volatile Oyl. 3. A pure and volatile Salt of the Faces (though the principal and largest part of the Volatile Salt always ascends and mixes with the Spirit and Oyl before distilled, as by tryal you may easily prove:) This Spirit, Oyl, and Salt, mix together, and unite them by digestion, circulation, and distillation, as is above taught, so have you the Powers of Carapays.

II. They are powerful in expelling Wind, and commonly give ease in the most intolerable Colick: they open all Obstructions in the Reins and Ureters, dissolve and expel the concretions of Sand or Gravel and Slime, provoke Urine powerfully, and warm

and comfort a weak and infeebled flomach.

III. They open Obstructions of the Womb, and cause a cleansing of those parts, facilitate both birth and after-birth, ease and take away the after-pains,

inwardly given, and outwardly applyed.

IV. They are good against the small Pox, Measles, Plague, and all malign and pestilential Feavers, cause rest, and remove the difficulty of Urine. They are profitable in the Jaundice and Dropfy, and a powerful remedy against the Apoplexy, Falling Sickness, Convulsions, Cramps, Palsies, Headach, Megrim, Verugo, Lethargy, sleepiness, and other cold and moist diteases of the head and brain.

V. They open all Obstructions of Liver, Spleen and Lungs, take away Coughs, Ashma's, and shortness

of breath, cleanse and heal Ulcers of the Lungs, cause agood appetite and digestion, and help a stink-

ing breath.

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VI. They are profitable against Catarrhs, or any defluxion of Rheum upon any part, and help deafness, being mixt with Oyl of sweet Almonds, and dropt into the Ear every morning. They comfort the Brain and Nerves, and are good against all diseases proceeding from cold and moisture.

VII. They are good against all manner of pains and old aches in any part, being bathed upon the place affected morning and evening; and are prostable in all old stinking Ulcers, Biles, Fractures, contracted and benummed Members, mixed with Palm

Oyl or other Oyntments, and so anointed.

VIII. They sweeten the sharpness of humours, prevail against Pleurisies, pains and stitches of the sides, Fluxes, bloody Fluxes, Lienteries, and other weaknesses of the bowels, and almost insensibly dissolve all coagulations in any part, proceeding from Wind, cold, or any sharp and corrosive humour: and therefore are of excellent use to be given after violent purgings, for that they pleasantly heal the bowels.

IX. The Dose and way of taking them. You may give from twenty to forty or fixty drops, or more morning, noon and night in a glass of Ale or Wine: and if any extremity require, they may be given oftener: outwardly bath the parts affected therewith morning and evening. Price twelve pence an ounce.

X x 4

CHAP.

### CHAP. XVIII.

Potestates Caryophyllorum, Powers of Cloves.

I. Ake Cloves, diftil from them an Oyl as we have before taught : from fresh Cloves distil an inflammable Spirit, or Water, which cobobate often upon both Caput mortuums at least fix or feven times, which restify, and perfectly dephitegmate. From the Faces calcind extrast a Salt, which purify and volatilize : unite thefe by Cinculation and Distillation, so have you the potestates Caryophylforum most pure, transparent and volatile, which keep in a stal's close Bopt for ufe.

II. They are a most excellent Cephalick, Stomatick, Cardiack. Splenetick, and Hysterick; curing the Headach, Megrim, Vertigo, Falling-fickness, Apoplexy, Lethargy, Convultion, Cramp, Numbnels, Palie, and other cold and moist distempers of the Head Brain and Nerves. They are good against dulnels and fleepiness, quicken the senses, sharpen the memory, and prevail mightily against Catarrhs.

III. They give eafe in the Colick, and gripings of the Bowels, expel Wind, are helpful in the Dyfury, and Strangury, provoke the Terms, and haften the They abate tumors of the Spleen, and pains of the fides and stomach by outward bathing.

IV. They are a good perfume, attenuate, open, discuss, are Sudorifick, Alexipharmick, and a specifick against the French Pox, and all corruptionsof humours: they remove Obstructions, and are profitable against barrenness from a cold and moist cause, mightily coroborating the Liver and Womb.

V. Given

V. Given in a very large dose, so as the Sick may sweat strongly upon them, they cure Agues, the Dropfy, Jaundice, and Green-fickness: inwardly taken, they facilitate the cure of all forts of Ulcers and running fores, and ease all manner of pains of the teeth from a cold cause, being as it were the Ultimines Refugiams.

VI They refresh the Senses, firengthen and fortify the Stomach, warm and excite its faculties, are good against loathing and Vomiting all pain and fickneis at Stomach, provoke appetite and help digeftion, to that it is much to be questioned, whether there be a greater Stomatick in the World than thefe

or no.

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VII. They refult all manner of Poylon, and the Venom and malignity of the Meafles, finall Pox. Calenture, spotted Feaver, and the Plague it felf: they are powerful against Faintings, Sickness at Heart, Swoonings, Palpitation, Sadness and Me-They chear the Heart, revive all the Spitits, Natural, Vital and Animal, comfort and foreify

all the Vaferra, and are a very great Cordial. VIII. The Dofe and way of raking them. You may give them from twenty to thirty, forty or fifty drops, morning, noon and night, in a glass of Aleor Wine; or they may be exhibited in the same Dose and Vehicle in any Fit of Fainting, Swooning or Sickness of the heart or Stomach . Outwardly bath the parts affected with them, morning and evening. Price two foldings amounts, In control

Free neap and Stupping and Dannels, proceeding from the account.

The control of the co

thirds. Ones Letharpy, and other fleepy

agrant Ouralls, Palifes,

### CHAP. XIX.

Potestates Lavendulæ, Powers of Lavender.

I. D Ruise the Herb and Flowers well, and adding a suf-D ficient quantity of Rain Water, with Sugar and Tell, cause it to ferment; which done draw off an inflammaale Spirit after many Cohobations, which perfectly defleymate, and referveit. Then take the same quantity of fresh Herbs and Flowers bruise them, and steep them twenty four hours or more, in warm Water, adding to every pound of the bruised matter six pounds of Water; then distil by a Vefica or Alembick, and Separate the Oyl from the Water, which reserve also. Lastly, from both the Faces calcin'd. extract a Salt, which purify and volatilize, and mix it with the before referved Spirit and Oyl, which unite by digestion, Circulation and Distillation: So have you Powers of Lavender.

II. The Virtues of these Powers are many and great, both for inward and outward Diseases; especially in those distempers proceeding from cold and moisture, whether in the Head, Brain, Nerves, Stomach, Liver, Bowels, Mesentery, or Womb: They cure old Aches, and pains, though of long standing.

III. They stop Fluxes of Rheum into the Eyes. and cause a pleasant, quick, and sharp fight: They are good against the Vertigo, or Giddiness in the Head, Droutiness, Carus, Lethargy, and other sleepy Difeases: They help also Stupidity and Dimness. of fight if proceeding from any accident.

IV. They are Cephalick, Neurotick, Cardiack, and Hysterick; profitable against Catarrhs, Palsies, Cramps,

Cramps, Tremblings, Head-achs, Megrims, and the like: they expel Wind, eafe the Colick, provoke Urine and the Terms, and if given in Travail, facilitate both Birth and After-birth.

V. They are good against the yellow Jaundice, comfort the Heart, revive the Spirits, and preserve from the Poylon and contagion of the Pestilence, and all other infectious and malign Feavers; being an Antidote and counter-Poylon, against all Vegeta-

ble and Animal Poylons.

VI. They are good against the Apoplexy and Falling-lickness, being taken inwardly, and the Temples bathed therewith: they are also good against pains of the Teeth and Gums, and take away a stinking breath arising therefrom, being taken inwardly, and also held in the mouth.

VII. Outwardly, bathed upon Paralytick or cold benumbed Joynts or Sinews, they warm, hear, and comfort them; fo also they help an extream pain of the Head, by Bathing the part pained therewith, and

raking the scent strongly up the Nostrils.

VIII. They comfort a cold Stomach, help a weak memory, clear the Eye-fight, and quicken the Senfes: they cause both retention and digestion of the food in the Stomach, expel Wind thence, ease pains of the sides and Hypochonders, repress Melancholy, and assware the tumour of the Spleen by bathing.

IX. They are powerful in repressing and drying up Catarrhs, and taking away the superssum the midicies of the Brain: given daily to Women which have the Whites, they help them; and are profitable against Coughs, Pcificks, and Asthmas; for they open Obstructions of the Liver, Spleen and Lungs.

X. They are profitable for Children that have the Rickets, being inwardly taken, and outwardly ba-

thed therewith: fo used also, they ease pains of the Gous proceeding from a cold cause, whether in the

Arms, Hands, Hips, Knees, or Feet.

XI. They dry up watery humours in Dropfies, eafe pains of the Ears, help Rheumatisms, and fits of the Mother, and prevail against Fainting, Swooning,

and palpitation of the Heart.

XII. The Bofe and may of using them. Dose from fifteen to thirty, forty, fifty or fixty drops or more, three times a day, viz. morning, noon and night, in Ale. Wine or fome cordial Julep: In Fainting or Swooning. Sic. give it in the Fit: Outwardly, bath well the parts affected therewith twice a day, viz. morning and night. Price twelve pence an onnce.

### CHAP. XX.

Potestares Limonium. Powers of Limons.

L. T Ake Limons in a great quantity, let them be and putrify till they are perfectly rotten, then mix them with three or four times their quantity or weight of Rain Water, and distil in a Copper Wesica tim'd within, for hange you Oyl and Water, which feparate, referving the OH: take again the same quantity of fresh Limons, bruise them wall, and add to them the former distilled Water, with which, and the addition of Sugar and Test, cause them to ferment, which being over, draw off the Spirit in an Alembick, which perfettly deflegmate and referve. From the faces calcin'd extract a Salt, with the former flegm, which parify and volatilize, and mix with the before-referred Oil and Spirit, and write them by a convenient digeftion, Circulation and reitexated Distillation, fo have you Powers of Limons, which keep in a glass close stops for use. L. They

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II. They are excellent to expel Wind, and to give ease in the most exquisite dolors of the Colick's they prevail against Painting and Swooning Fits, weakness of the Spirits, Palpitation, and other pas-

flons of the Heart and Precordia.

III. They are Cephalick and Cordial, and cure all cold and month Difeases of the Head, Brain, Nerves, Stomach, Liver, Spleen, Bowels, Womb, and Joints, by warming, enlivering, and comforting or Affengulating them : they corroborate Nature mightily, revive the Spirits, firengthen a weak Stomach, and make a cheerful and merry Heart, expelling melancholy Vapours from the Blood and Spirits.

IV. They drive forth the Measles and small Pox, refift all forts of malign and Peffilential Feavers, and wonderfully fiftengthen and defend the Heart and -

Brain in all their faculties.

V. They are prevalent against the Head ach and Megrim, from a cold Caule; as also against the Lethargy, Cards, Apoplexy, Fallingfickness, Palfy, and flich other like difaffections of the Netves: being four or five times bathed upon the place, where the Cramp

comes, they infallibly cure in.

VI. They are a good remedy in the Quinfy and Pleurify, pains and stitches of the fides, as also against the biting of mad Dogs, Vipers, or any other venemous Beaft: They have a fragrant scent, and refell the Spirits, by barely smellitig to: They provoke fweat, and expel the malign humours by perspiration through the pores of the skin.

VII. They are admirable against all manner of Pains or Aches, coming of cold, Strains, or Bruiles, After pains of Women in Child bed, as also in Gouts, Sciarica, Rheumatilins, Scurff, Morphew,

Scabs.

Scabs, Leprofy, &c. and that only by bathing the parts affected with them two or three times a day.

VIII. The Dose and manner of ning them. You may give from twenty to thirty, forty, fifty or fixty drops in a glass of Ale or Wine, in a glass of Rhenish Wine and Sugar, or some cordial Julep: let them be given three times a day, viz., in the morning fasting, an hour before dinner, and last at night going to bed, and so to be continued for a week, fortnight, or longer as you see occasion. Outwardly bath with them morning and evening for ten or twenty days: they make the skin purely soft and smooth. Price twelve pence an sauce.

# CHAP. XXI.

Porestates Pulegii, Powers of Pennyroyal.

Ake a great quantity of Green Penngroyat, bruise it mell, and putrify it for some days; shen mix with it a great quantity of Rain Water, at least four times the same weight, this distill in a Copper Alembick, so have you Onl and Water, which Separate, reserving the Oxl. Take again the same quantity of Green Pennyroyal, which bruise, and udd to it the former distilled Water of Pennyroyal, make them ferment with Sugar and Test, which being compleated, draw off in an Alembick the inflummable Spirit mixt with flegm; This Spirit deflegmate and reserve also.
Lastly, I ake the faces of both parts, calcine thorn, and with the aforesaid flegm, draw forth a Salt, which parify and volatilize; mixit with the before-reserved Oyl and Spirit, and unite them by digestion, circulation and distillation; so have you the pure, transparent, and volatile powers of Pennyroyal, having the same smell and tast with the Herb growing in the Garden. II. They

II. They confilt of most subtil Parts, attenuate, open, cut, dissolve, provoke Ulrine, break the concretions of Gravel and Slime, and expel them, provoke the Terms, and hasten away the Child, whether living or dead, as also the After-birth; and being bathed upon the belly and share, they miraculously ease and take away after Pains.

III. They are profitable against the Dropfy and Jaundice, and give present ease in the Colick; They are Stomatick, Cordial, and Pectoral; open Obstructions of the Lungs, and are very good against Coughs, Colds, Asthma's, Wheeling, shortness of

Breath, and difficulty of Breathing.

IV. They are prevalent against an inveterate Head-ach, Megrim, Vertigo, Apoplexy, falling Sickness, Convulsions, Pally, Cramp, Numbress, Lameness, and weakness of the Nerves, Muscles and Joynts, being inwardly taken, and ontwardly

bathed therewith.

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V. They are very powerful against all manner of Aches, Pains, Strains, or weakness of any part, as also against an inveterate Gout, Sciatica or Rheumatism, proceeding from a cold and moist Cause. They are an Antidote against Poyson, the bitings of mad Dogs, Serpents, and other venemous Creatures.

They prevail against the malignity of the Plague, and all other malign and pettilential Feavers: as also against Scorbutick and Pocky Boyls, Botches, Scabs, Scurff, Morphew, Leprosy, nocturnal Pains, Gums, Nodes, Tophs, and other like venemous and poysonous Symptoms, by constantly taking them inwardly every day for two or three months, and outwardly bathing therewith morning and night.

VII. They provoke Sweat powerfully, and are a great Alexipharmick in the French Pox, being daily taken in Ale or Wine, after the manner of diet, and have performed as much as any Gnajacum diet could do, being a kind of Specifick against that Disease, and its malign and Poylonous Symptoms.

VIII. They care Barrenness in Man or Woman (if there be not a defect of Parts) cleanse, throughton, and fortify the Womb, and are a Specifick for

Difeates in those places.

TX. They are prevalent against Catarries, and cold Rheums, help defects of the Eyeright, cure a stinking Breath, ease Paiss, and soften hard Tumours of the Liver, Spleen, or Mesentery, by bathing those Regions therewith; for they warm, strengthen, and comfort even all the parts

of Mans Body,

X. The Dose and may of using them. The Dose's from twenty to sorty or sixty drops or more as the Sick is able to bear, three times a day at least, and in case of the French Pow five or six times a day, or as often as the Sick drinks: you may give them in Ale, or Wine and Water mixt, or in some Syrup, or Cordial Julep, and so to continue them for two or three weeks, or two or three months, as you see occasion: Outwardly, bath the parts affected with them twice a day for sen or twenty days. Price two solitings means.

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### CHAP XXII

# Poteflates Rolmarini, Powers of Rolemany.

I they are made in all respects (of the Leaves and flowers) as Powers of Lavender before going; Uniting the perfectly deflegement Spirit of Resember, with its Volatile Oyl, and Volatile Sult, by digestion, Circultation, and a repeated distribution. Where note that the greatest part of the Volatile Sult artises and mixes with the Spirit and Oyl by distribution, there being not the tenth powethere of lest in the saces, which after cuttination is drawn forth and Volatilized as Salt of Tartat. Yet that remaining part, after purefaction of the saces, might by many Cohebrations of the Spirit, be wholly drawn forth, and made to ascend, hitheat any Calcination at all. And this is evident, for that after incineration they will yield to fixe Salt of any kind, without infinite labour.

II. This is a medicine of wonderful Virtues; nor do I know how to praise it enough; my perpetual conversation in the use thereof, has given me a large satisfaction as to its Virtues, and that it is above the

force of any ordinary remedy.

III. It prevails against all cold and moist differes of the Head, stomach, Heart, Womb, and other Viscera, as Apoplexies Falling-sickness, Convultion, Cramp, Palsie, Trembling, Numbries, Weakness of the Nerves and joynts, Head ach, Megrim, Verilgo Carus, Lethargy, Sleepiness, and Dinnels of fight.

IV. It comforts the Head and Brain, refreshes the Senses, cheers the Heart, resists Poylon, and revives all the Spirits Natural, Vital, and Animal 1 to 15 good against Palpitation, Families and Syrooming

Fits, fickhess at Heart and stomach, stinking of the Breath, indigestion and want of Appetite, and other defects of those Parts.

V. It opens obstructions of the Liver, Spleen, and Womb, and is an excellent thing against the Jaundice: It is good against the most vehement Catarrh, cold Rheums. Windy Goots, Rheumarisms, old Aches and paus in any pare of the body: and especially

those of the Back and loyns.

VI. It is famous against the Griping of the Guts, the Colick, Wind and sharp or acrimomous humors in the stomach and howels wit provokes Urine and the Terms, facilitates both Birth and after Birth. It warms, comforts and strengthens all parts weakened by cold and moisture, hard labour, or over straining, or that have been hurt by any fall, bruise or Wound.

VII. Is cauteth watchfulness; and takes away dulpels & Drowliness, strengthens the Nerves powerfully, on said to be a specifick in after pains, the Palfy, Cramp, yellow Jaundice and a stinking Breath. It preserves Health, and keeps back Old Age, making

those who take it, look always Young.

VIII. It is good against the bitings of mad Dogs, Serpents, Vipers, or any other Venomous creature, and is an absolute antidote against the Malignity and Poyson of the Plague, or any malignant and pestignized severy, and is an Excellent preservative in all

infectious times and places.

IX. It is prevalent against the Pleurisy; for it attenuares thick humours, digests crudities, opens Oblivetions, distolves congelations, and provokes sweat; and being given in a large Dose, an hour or two before the Fitosian Ague, it has been found then runes to care it in

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twenty drops to thirty or forty; two or three times a day viz. in the morning falting, an hour before Dinner, and last at night going to bed in a Glass of Wine; but in extream diseases, where great necessity requires it, it ought to be taken four; five or fix times a Day; in all the liquor the fick drinks, twenty, twenty five or thirty drops at a time, as you see the Patient can bear it & to be continued six, eight, ten or twelve weeks as you see occasion. Outwardly bath the parts pained or hurt therewith, morning and evening very well; and continue it for ten, fifteen or twenty days, or more, if need requires.

Price eighteen pente an onnce.

### CHAP. XXIII.

Potestates Succini, Powers of Amber.

In Make the Amber into most subtil powder, put it into the best rectified Spirit of Winesdigest in Balneo Mariæ for sifteen days: then distil, sirst with a gentle sire, so have you a piercing Spirit, afterwards ayellow Oyl which mixes with the Spirit, then a red oyl which settles to the bottom, and is to be rectified three or four times. From the Caput Mortuum calcined extract a Salt which purify and volatilize; then joyn the Spirit, rectified, Oyl and Volatile Salt together, which circulate till they are united, and let them be drawn over in one distillation.

II. Or thus. Take Amber in fine powder one pound, affuse upon it Spirit or rather Powers of Turpentine two pound or more digest in Balneo Mariæ for fisteen days, then distil with a gentle fire, & cohobate digesting four days: distil again first with a gentle fire, so will the subtil Spirit ascend; then increase the fire, and continue the distillation till no more will arise; so will a redOyl he at the bottom. From the faces as before extract the Salt, which purify and volatilize, and jayn with the Spirit

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VI. They

and Only circulate then for a mouth, and perfectly unit

them by drawing them over in one distillation.

HI. Or Thus. Take Amber in fine pender a grand: redificed Spirit of Limany a quart: put all anise a Glafs Resort will luted; to which fit a large Receiver mithous busing, left she has pars should break at: give fine gradation, and as left a fire if suppression, to drive out the Orl mith the Spirit, which continue till no more Clouds appear in the Beceiver: ratify the Orl; and free the Spirit from all imaginable stages. From the Caput Mortuum exerate a Sale, which purify and volutilize: mix the Spirit, Orl; and Salt together, circulus, and draw them over in one distillation that they may be purify united.

IV. The powers of Amber are most admirable against all cold and most diseases of the Head, Brain, Nerves, and Womb: They care head acts, Megrims, Vertigo's, Lethargies, dulness, drousiness, sleepiness and all other pinuitous distempers of the brain. They are admirable against Convultions; and cure Cramps so perfectly, as that they never return any more in

that place, only by bathing therewith.

V. They are most excellent in Palsies, and all Refolutions of the Nerves they cure the Sciatica, Rheumatism, and Gout, proceeding from a cold cause, beyond any other medicine: only by bathing the place with the same: and after the same manner they ease and take away all manner of pairs & aches proceeding from cold, whether old or newall which is o miraculously done, as if it was done by Inchantment.

VI. They wonderfully take away After pains in Women newly delivered, being bathed well upon the belly, and a flannel moistned with the same, presently laid over it. Given to a Woman in Travel they cause speedy delivery, and also facilitate the

coming away both of Birth and after birth.

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VII. They are admirable against the Fits of the Mother in Women; and being given in a large dose they provoke sweav, and thereby provail against, and cure Agues. They kill worms in Children, expell Wind, and give ease in the Colick. They heaf any ordinary new wound at once dressing, are good against hints and punctures of the Nerves and Tendons, and regreeve a Gangreen of Mortification newly begun.

VIII. They relift the putrefaction and poylon of the Plague, and all pethlential and malign Feavers; expel and deflioy the venom of mad Dogs. Vipers, and other venomious Beatls. They firengthen weak Sinews and Limbs, help the loss of memory, fleat, wanth, and cleanle a cold and differenced Womb.

IX. The virtues of these powers of Amber are fogreat, that I can never say enough in their praise, being a Medicine I have daily used almost these twenty years, and scarcely ever without admired success, and great applants, especially in removing of all manner of Pains in any part of the Body coming of cold, which they do in a trifle of time.

X. The Dole and manner of using them. For outward ases, bath the places affected therewith very well twice a day: in a week and sometimes less, you will sind great relief: inwardly you may give them morning and night from fifteen drops to thirty, forty, or fixty drops, in a Glass of Sack, and continue the same twenty, thirty or forty days or more as you see occasion.

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Price twelve peace all onnice.

# CHAP, XXIV.

Potestates Terebinthina, Powers of Turpentine.

I. To make the Powers of Turpentine. Take Venice
Turpentine a pound: Spirit of wine two pounds,
mix well and digest in B. M. for fisteen days, then dissift
in a Glass Alembick in B. M. so will you have a subtil
Spirit, mixt with the Volatile Salt and Oyl of Turpentine:
afterwards a yellow Oyl: mix and circulate these together,
then unite them by drawing them over in one distilation in a
Glass Stillin B: M.

II. The Virtues of the powers of Turpentine. They are Diuretick and Aperitive, cleanfing the Urinary palfages of all manner of filth and matter which obstruct them; or stop the making of water. They are excellent to break the stone, and bring forth and and gravel both in Reins and bladder. In a virulent Gonorrhoea, they are excellent, for they powerfully

cleanse and heal.

III. They cure all wounds though in the Nerves, and old Ulcers, though never fo rebellious; they help the Gout, and ease old aches and Pains, and comfort and strengthen the Nerves to a wonder, curing most Difeases happening to them: they kill Worms in Children, and take away the crude matter which

breeds them.

IV. They fosten the Mesentery, strengthen the Liver, and depurate the Mass of Blood; bringing forth pituitous and serous humors, as also tough and viscous Slime. They are also prævalent against Palfies, dead Palsies, Convulsions, Numbness, Cramps, and all other Diseases proceeding from cold and moist Causes.

Elixir Proprietatis nost. Chap: 25.

V. The Dole and manner of wing it. Dole is from half a drain to a dram in fyrup, of Limons, or any other convenient Syrup, morning and evening, drinking after it a little glass of Sack, or Ginsamon Warer, and continuing it as long as need requires. Out wardly bath the parts affected therewith mostling and night for some days, or till the Sick finds case You may apply it to wounds and Lucers with sint or make it into the form of a Ballom, with Ovicos Numers, or fome fuch like thing, and forthers.

V. It is a forent ching against Gra

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in the Reins and Bladeler; calls our vilcous and tarrations Humors in VXX as a Ra A H Quarting Good,

Elixir Proprietaris noltrum Car Elixin of Propents.

L. Ake Powers of Caraways a Gallon; choice Laglish Saffron four ounces: mix and extract therewith a Substantial Tincture : In this tincture ( drappe off from the Saffron ) pat Powder of fat Myrth four ownces : digett ten days, shaking the glass two or three times every day: being well fetled, decant the clear Tinoture and referve it. tage Tincture of Sena made with Powers of Caraways a quart or more: choice Aloes Succotrina in Powder two pounds: disolve the Aloes in the Tineture of Sena by degrees, which done, mix it with the former reserved Tin-Eure: digest twenty days in a very gentle heat, shaking the Glass two or three times a day: then being well festled, decant off the clear Tineture into another Glass, and keep is close stopt for use.

II. This is an excellent Medicine, of hot and thin parts, opens all manner of Obstructions, comforts all the Senses, and parts of the Body, revives the Spirits, chears the Heart, and makes the Sick pleafant III. It Y Y 4

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III. It is a very good thing to be taken every Moraing failing, and Night going to bed, in pertilenrial climes, for it preferves from the Plague, and the

realignity of the Contagion.

W. It is Cephalick, Stomatick, Pectonal, Candlack, Spienerick, Nephrinick, Hysterick and Astroicides it refreshes the animal and visal Spirits, infinitely Brongthens the Stomach and all its facilities. causes a good appetite and digethon, opens Obstru-ctions of the Lungs, Spices. Worns and Rome oures Althres's and Hearteness, provokes Urine and the Terms plentifully, and expels Wind.

V. It is a fingular thing against Gravel and Shine in the Reins and Bladder; casts out viscous and tartarous Humors in fuch as are afficted with the Gout. Rheumatilin or Scurvy: it cales Pain, expels Roy fon is Antifebraick, and refrores fuch as are in Confumptions. It comforts the Stomach, takes away Loading, flore Vomiting, takes away Catarrie and

VI h is a most admirable thing against a Care chymick disposition of Body, and all Diseases proceeding from repletion; it evacuates fallely, earlier and with great fuccess, all rotten, patrid, and here-

rogene humors lodging in the Body

VII. It facilitates the healing of old Liloers and running Sores, cures the Droplie, Jaundice, and lo-pens obstructions of the Stomach, Liver, Messentery and Bowels; and by sympathy it is faid to help difeales of the Head, as Headach, Megrim, Vertigo and Melancholy, proceeding from obstructions of the Spleen; and is a specifick against most difeales of the Womb, as Obstructions, Suffication, die

VIII. We know by experience, that there is scarcely a more noble and efficacious Stomatick in the whole

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Kidneys or Bladder

whole republich of Medicine. It conferves Nature to extream old Age, and cures Quartans: it quickers the Senies. Areinsteins the Drant and Memory, ones Lechargies, Palites Pleurines, Jambice, Catarris, Sciency, Gour, Scianica, Rickers in Children, &c.

TR' It kills Worms, purifies the filood, facturates its circulation, and is a specifick in cutting the Kings Evil, Herpes, Scabs and other kinds of breaking out, it is subtle and able to penetrate, and there for not only percently provokes the Terms, but all the control of the penetrate of the

for not only potently provokes the Terms, but alfor not only potently provokes the Terms, but alfor most excellently cleanter inch as are in Cauri-bot.

A Def and the Topy The Dok is
from ten drops to revently outry forth or more
according to the age and firenge, in a trials of Gamany or white White and Sugar. Give it is the
Morning falting, half an hour before Dunger, and
left an align going to test, observe the engine of
the Parient, and to give it accordingly two or three
perfors purges,
and to the Topy to the Court of the

# V. It is a foscilekaesing all menor of purid

## Oleum Sulphurs of Oft of Sulphur.

L. The alies of correler Cop, which then upfile down, appear which place another Cop filled with metted Sulphin, place shieff in the middle of a great earthen Fan, over these bang a glafe Bell with a long net! like a Matrasi, as Inch and an half in Diameter, and about a yard long, having a bole at top to give vent to the Air, which does advance the burning: give Fire to the Sulphur with a redbus Nail or some such like thing, and when your Sulphur is spent, put new in the same place, and continue thus to do, until

until you have the quantity of Orl which you defixed which

heep in a Gheff clofe hope for ale.

If. This Oyl is an Antidote statist Plague and all malign and petillential readers, as the Feaver Campor, or burning Fever, the Calenture, spotted Fever, and sweating Sickness; it results all manner of Comunitions and Putrefaction, inwardly taken and

outwardly applyed

Girwardiy applyed.

Jill It obens all obstructions of the Stomach and Fairles, taking away Coughs, Colds, Althmas, difficulty of Breathing shortness of Breath, Obstructions, inflantifications, and other differences of those parts: It cools admirably, quenches Thirst, strengthees the Stomach, provokes Appetite, and causes a good digestion. It also notative provokes the Tehris.

Bowels, Reins and Bladders is good against the Green-fickness familie. Dropty, Cachena, Hypothondriacis melancholy surfects, diffolyes the concretions of Sand of Gravel and Slime, whether in the Kidneys or Bladder, and expels it.

V. It is a specifick against all manner of putrid and burning Feat whether continual or intermitting; it abates, their Symptoms, as Burning, Heat,

Thirst, Restlessness, Watchings, &c.
VI. It is a powerful Diviretick, and the most for: midable enemy against the Scurvy. It cures Cachexies, and is a rare thing in Drophes. It cures the Scurvy in the Teeth and wonderfully whitens them-It is good against nauseousness, and loathing, and a perfect remedy against Vomiting in all Diseases. VII.It takes away all corruption in putrid Sores,old.

Ulcers, Fistula's, &c. being mixt with spirit of Wine in a due proportion, (and that it be not too sharp ). and 1

and cures wounds in any part oftentimes at once drefting; mixt with the Chymical Oyl of Camomil, or Turpentine, it alleviates all pains of the Gout whereever, discusses Nodes, and cures contracted and withered Members.

VIII. Though it takes away the preternatural Moisture in Dropsies; yet it restores the natural and radical Humidity, which is almost spent, for that it fortifies the whole Body against the power of the Dropsy, and Scurvy, and all the symptoms, and

disaffections proceeding therefrom:

IX. It powerfully purifies the Blood, and refifts all manner of putrefaction and Poyfon, cures the biting of mad Dogs, Vipers, and other venomous Creatures: it is a truly noble Medicine, and may be exhibited in all Cordials.

X. It cures any ulceration in the Mouth, Throat, Uvula, or other parts, (only by touching the Ulcer with the Oyl:) for these purposes there is scarcely a better remedy, as well to enlarge the Orifice, remove a Callus, as to correct and prepare it to a good healing, by touching the same with Lint dipt therein, on

the end of a Probe.

XI. It makes a coffive Body loofe, and keeps it foluble: it cures Hecticks, Confumptions, Afthmas, and Ulcers of the Lungs. In the French Pox it is excellent, and may ferve instead of a diet. It helps Catarrhs and Rheumatisms, and eases the pains of the Gout, and that by bathing therewith two or three times a day (mixing of it with a fit proportion of Water, or spirit of Wine:) It strengthens the Nerves and Muscles; and is said to cure a confirmed Leprosy

XII. The dose and way of using them. The dose is from five drops to ten, fifteen or twenty drops, or so many

es will give the liquor it is esken in a pleasant and grancful Acidity. It may be taken in Beer, Ale, or Wine; and ought (when taken) to be mist with all the Liquor the Sick drinks: and being once begun withal, it ought to be continued for force months, to make a change and alteration of the liabit. Frice eighten pener at omit.

# CHAP. XXVII

Tabula Emerica noffra. Our Vomiting Louisings.

I Ake Emerick Tarrar of Applicable an annee Lokenger of Sugar Penried four musics: mosfew
it with Whites of Eggs one ownce, and thicken it with a convenient fire, then make it into Lovenger of white form you
pleafe, meighing half a Dram a sleet, other wife you may
make them left, at a venium of and proportion the dofe by
meight, drythens and keep them for afe.

fi. This is the best of all Emericks, operating with much fafety and gentlenets it cares all old sains of the Head, and other Diseases affecting it, a Head-ach, Megrint, Verrigo, Frenzy, Mathets, Attoriexy, Falling fickness, Lethargy, Carus, Melancko, very

ness of Memory, or.

IN. It takes away a notice and pain in the ears, difficulty of hearing; pain and wind in the Stomach and fides, the Pleurity, and other difficultions of those parts. It cleantes a fool Stomach, cures Loathing and Vomiting, causes a good appeals to food, and a strong digestion.

IV. It is a most admired thing against the Sciency, Droply, and Goue; it room out and perfectly takes away the scorbucick taint, with all its evil symptoms.

It evacuates the Water in Dropfies, and takes away by the root, the Tartarous matter breeding the Gout.

V. It is profitable against the Cachexia, the Greenfickness in Virgins, unnatural Longings, the yellow Jaundice, Diarrhosas, Dysenteries, and the contagious venom of the Plague of Pessilence: It opens inveterate Obstructions of the Liver, Spisen, and Mesentery, and prevails against scirrhous Tumours in any part of the Body.

VI. It powerfully opens Obstructions of the Lungs, and is profitable against Catarris, Coughs, Colds, Asthma's, Wheefing, showness of breath, difficulty of breathing, Phithsick, Apostems, and Ulcers of the Lungs. It is good against putrid and acute Feavers, continual and intermitting Quartans; and

kills worms in Children.

VII. It resists the corruption and putrefaction of the humours, cleanles the Blood, helps its circulation, and prevents it from Ragnating, gently carrying off all the ill humours by vomiting and Stool: and it is so powerful a Specifick in the Gout, Sciarica, and a Rheumatism, that sew other things can equal it.

VIII. It provokes the Terms, perfectly removes Crudites from the Stomach, helps Hypchondriack melancholy, and very happily cures Quartans; yea Tertian and Quotidian Agues It causes old rotten. Sores, malign Ulcers, and Fishula's, speedily to heal, by carrying off the matter which feeds them; and prevails against eating Herpes, Tettars, Ring worms, Scabs, Botches, Boyls, Pushes, and such like leprous Distempers.

IX I have given these Vomiting Lozenges to Children who have been in a pining condition, or would not eartheir Food; and to such as have been afflicted with Vomiting, as also to children that have

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had the Rickets, or been troubled with Worms, and it has miraculously cured them, at once or twice

taking.

X. The Dose and way of taking them. Dose from fifteen Grains to twenty five thirty or thirty five Grains; but this latter Dose ought only to be given to strong Men and Women. Infants may take from fix to nine Grains: Children of two or three year old from nine Grains to twelve or fifteen: after the same manner you may proportion the Dose to all persons from four years old and upward to forty, fifty, fixty or feventy years of Age, giving from fifteen Grains to thirty or thirty five according to Age and Strength. It is to be eaten like a Sugar Plum, in the morning fasting, in some warm Broth, Posset drink, or Mace Ale, which as it works ought to be drunk plentifully: when it has done working give the Sick, a glass of burnt Claret, or mild Ale. And as need requires, you may repeat the Dole, two three or four times, letting always two, three or four days be between each Dose. Price two Shillings fix pence an ounce.

#### CHAP. XXVIII.

Sal Mirabile nost. Our wonderful Salt.

I. Ake pure Sal Mirabile Glauberi a pound: Salt of Wornwood, Volatile Sal Armoniack, of each half a pound: Volatile Salts of Tartar, of Harts-horn, and of Mans-skul, of each a quarter of a pound: Grind each into a subtil powder a-part, then mix them well together, and keep them in a Glass close stopt for use.

II. It is a Salt of very volatile parts, digefting and cleanfing; it opens all manner of Obstructions in any part

part of the Body, and is a great refolver of all slimy, Viscous, and Tartarous matter, from whence proceed the Sciatica, Rheumanifm, Gout, Scirrhus

of the Liver and Spleen, Agues. & c.

HI. It dissolves the Stone in the Reins and Bladder to a flime, and brings it away, as also Gravel, Purplent matter, and whatfoever obstructs the paffages of the Urine in the Reins, Ureters and Bladder, provoking Urine, and caufing it to be brought

away with speed and eafe.

IV. It cures the Jaundice, by reftoring the loft Animal Salt, prevails in the Droply, Cachexy and all watery Diseases, is profitable in the Colick. Wind in the Stomach or Bowels; opens obstructions of the Lungs, and is good against Asthmas, Coughs, Colds, Wheelings, difficulty of breathing,

fhortness of breath. &c.

V. It rectifies and corroborates the tone of the Stomach, reftores loft Appetite, helps digeftion, and eafes intolerable pains in that Bowel. Being taken for eighty or ninety days together or more, it has cured scirrhous Tumours, and Cancers in several parts of the body; as also the Kings-Evil, running Sores, old fordid and rebellious Ulcers, Fiftula's, Gangreens, Mortifications, &c.

VI. It is of miraculous use against the Worms and Rickets in Children, and other weakness happening to them: It prevails against Convulsions, Palfies, fits of the Mother, obstructions of the Womb, stoppage of the Terms, and other Hysterick distem-

pers.

VII. It is a most admirable thing against Cataracts, whilst in their beginning, it helps dimness of fight, cloudiness, year blindness it self, by cleanling the Brain, removing obstructions in the Optick Nerves

and Grengthen the Animal Spirits which fill them.

VIII. I have Gen great things done by it, being used many days regether, in the cure of the French Pox & Schryy, for it is an antidone against all venereal Venom, takes away the Pocky and Icorbutick Tanit, Iweetens the Blood, and causes the Flammula Cords to humclear: for this Salt refolves, cleanles, and purifies to a wonder, and is a powerful Specifick in the Gout, fo that few things can equal it.

IX. It is of good use in Quinties, Pleurifies, Peripneumonias, Eryfipelas, and other like differapers proceeding from preternatural heat, and obstruction; for taking away the obstruction, it distolves the Coagulation and Stagnation, and causes the blood and

humours to circulate freely.

X. It is an excellent thing against all Agues and Feavers, whether continent, continual, or intermitting; prevails in especial against Tertians, and Quartans, all burning, malign, and peffilential Fea-vers, destroying the preservatural heat, preventing or expelling the putrefaction, and relifting the very

poylon of the Dileale.

XI. It is a good Sudorifiek, expels and drives from the heart, is good against Poyton and Plague, as also the biting of mad Dogs, Vipers, or other venomous Creatures: It comforts and refreshes the Head, Brain, Nerves and Animal Spirits, and prevails against all diseases, affecting them, as Headachs, Megrins, Vertigo's, Epileplies, Apoplexies, Pallies, Convultions, Cramps, Lethargies, Carus, dullness, Sleepiness, Frenzys, Madness, Hypochondriack Melancholy, Scabs, Inch. Lilicers, Bouches, Boils, Morphew, Scurf, Leproly, &c. all which proceed from a deprayation and visious property of the Blood and Animal Spirits XII. TW

XH. The Dose and manner of taking it. It may be given morning and evening from ten Grains to fifteen or twenty according to age and strength, in a glass of Beer, Ale, or Wine, or in a spoonful of Syrup: and it ought to be taken for two or three months together, the Patient purging once every ten or twelve days with our Family Pills. If the Sick cannot take so large a dose, you may give four or five Grains at a time, and let it be taken four, five, fix or seven times a day, as aforesaid, or oftner. For the Gout, give it also inwardly, and apply it, outwardly, disolved in Wine: dip a linnen cloth in it, and apply it to the place, which moisten with a spunge as often as it drys for twelve hours. Price six shillings an ounce.

## CHAP, XXIX.

Sal Vitriolatum, Or Salt Vitriolated.

I. T Ake the pureft Salt of Tartar as much as you please, or if you please, instead thereof Oleum Tartati per deliquium: affuse thereon the best Oyl of Vitriol a sufficient quantity, viz. so much till you see the Ebullition ceases, which you may know by stirring the matter: then gently evaporate away the humidity to dryness, continually stirring of it in the evaporation with a wooden. Spatula, but especially when it begins to grow dry, so will you have a most pure white Salt, which keep for use.

H. After the same manner may you vitriolate lapis prunellæ: or you may prepare it by the affusion of Spiris of Niter in like manner; so will the Sale be Nitrated, white and pure as the former and having the same properties and

virtues.

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III. These two medicaments are both of a nature, and serve both to the same ends and intentions; they cause digestion, strengthen the stomach, and cause a good appetite, distolve Tartar in the Body, and open all obstructions whatsoever, curing Feavers, Green sickness, stoppage of the Terms, Quartans, co.

IV. They are indeed famous openers of obstructions; they provoke Urine, open all the Urinary passages, dislove the stone, and all Tartarous coagulations in the body, and expel them being dissolutions.

yed.

V. They are prevalent against Pleurisies, and all stoppages of the stomach. Lungs, Bowels, Reins and Bladder, by which they help Coughs, Asthmas, Confumptions, Hecticks, Cachexia's, Dropsies, &c.

VI. They are wonderful against the infection of the Plague, being scarcely inferiour to any other thing now used; and prevail against all burning, malign, and pestilential Feavers, as Measles, small Pox, Spotted Feaver, Calenture, burning Tertian, &c. potently resisting the venom and poyson of the Disease.

VII. They are excellent to cut and digeft thick and tartarous Humours, refift putrefaction, allay inflammations and heat, and cure putrid Feavers and the fweating fickness. They are an antidote against melancholy, prevail against Agues, Catarrhs, Rheumatisms, Gouts, Scurvy, and all impurities of the

Blood.

VIII. They are faid to be specifick in the Colick, especially if prepared with Spirit of Niter, giving present ease, and removing all the obstructions of the Bowels. In a Lotion or Gargarism they stop Gangreens,

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Gangreens, (being dissolved in Wine, mixt with Spirit of Wine) take away rotten slesh, warts, and heal Sores, Cankers, and Ulcers of the Mouth, Throat

and other parts.

IX. They are very powerful aperitives and deoppilatives, working all their effects with a world of iweetness and pleasure. They prevail against most affections of the Head, Brain, Lungs, Stomach, Liver, Spleen, Pancreas, Mesentery, Reins, Bladder, and Womb, curing all diseases in those parts proceeding from the slimy, tenacious and viscous Humours.

X. They provoke stools, purify the whole mass of Blood, renovating the whole man, remove the malignity of humours, cure the Kings-Evil, Rickets in Children, kill Worms, and are a Specifick against the Dropfy, Jaundice, Dysenteries, Iliack, &c. Colick Passion, Passies, Apoplexies, Gouts, Leprostes, Megrims, Vertigo's, Epilepsies, Carus, Lethargy, fits of the Mother, &c. by taking away Flatulencies, Watery, and Tartarous Viscosities,

XI. The Dose and may of giving them. Dose from fix Grains to fifteen or twenty in Broth, Ale, Wine, Syrup, or other convenient Vehicle. You may give of either of them, two, three or four times a day, or oftner, as you see occasion. Price eighteen pence an

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#### CHAP. XXX.

# Calomelanos, The white Purge.

TAke Venetian Corrosive sublimate, powder it, to which put an equal weight of purged Quick-silver; incorporate them by beating or grinding in a Marble Morter, so long till the Quick silver cannot be seen, to which put so much spirit of Vinegar, as may make the Powder wet or only moist; put it into a small long neck'd Matras, but of that bigness, that there may be at least five parts empty when the matter is in; let it not be luted, that you may fee to the bottom, which place above the middle in Sand; put first a gentle fire under ir then encrease it by degrees fix hours, that the Mercury may be driven from the bottom into the middle concavity of the Matrass; which being separat d from that at top and bottom, reduce it into small Powder, Sublime it the second time, and the third time, repeating the operation to the fixth time (but abating the quantity of crude Mercury) till it has lost its acrimony, is freed from all impurity, and becomes white as Snow.

II. This is a specifick and great secret against the French Pox, Gonorrhoea, or running of the Reins, and all other venereal symptoms, as Boils, Botches, Scabs, Nodes, Tophs, Gums, Scurf, Morphew, Pocky Leprosy, Ulcers, Sores, Cankers, nocturnal pains, and curing them if wisely used, to a wonder.

III. It is a thing of fingular use in curing the Scurvy, Dropsy, Gout, Rheumatism, Kings-Evil Megrim, Vertigo, and other diseases of the Brain. It is profitable against the Cachexia, yellow Jaundice, Itch, Tettars, Ring-worms, ill-natured and rebellious

Ulcers,

Ulcers, eating Herpes, &c. Against those eating Herpes, Ulcers, &c. you may (as well as giving it inwardly) use it outwardly, by strewing the impalpable powder thereof, upon the place affected, or mix it with Pomatum, Basilicon, &c. and so apply it.

IV. It kills Worms both in the Stomach and Bowels, and is so fafe that it may be given to Children it prevails against rebellious Agues, inveterate Catarrhs (given with other purges) and is a wonderful thing against the stubborn and rebellious Kings-Evil, for it melts, (as it were) the viscous and Tartarous matter, and carries it off by stool.

V. It is a famous remedy in all other deplorable Diseases, proceeding from putrefaction of humours; for it purifies the Blood, sweetens the Lymphatick juyce, corrects the vices of the Viscera, and rectifies the very marrow in the Bones, thereby freeing the

whole body from all filth and uncleannels.

VI. It is a most singular Cathartick, and may merrit the name of Panacea, purging gently by stool, not at all by Vomit. It brings forth all poylonous and vitious Humours, cures Ulcers in the Reins and Bladder, and diffolves all scirrhous and Scorbutick Tu-

mours whether inward or outward.

VII. The Dose, and way of using it. To Children you may give from feven Grams to ten or twelve with half as much powder of Scammony. To ftrong persons from twenty Grains to twenty five or half a dram, fometimes to two scrubles. Or with fixteen Grains thereof, you may mix two Grains of Mercurius vite, which being ground together for about two hours. may then be mixt with twelve Grains of Scammony; and fogiven every other day in the morning fasting.

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VIII. It is best mixt with some purging extract or powder, and so made up into Pills, or a Bolus, with the pap of an Apple, stew'd Prune, Honey, &c. and so taken at night going to bed, or after midnight, which is better: but if the sick has an easy body to work upon, then it will be best given early in the prograing.

IX. But I often give it alone in very fubtil powder over night in Conferve of Roses, or a little Syrup, and then the next morning exhibit a proper purge against the distemper; and so repeat the same in like manner again every third or fourth day, for ten or

twelve times, or fo long as I fee occasion.

X. If it be taken to flux withal, you may give it from a scruple to a dram, augmenting the dose for sour days together, with care and observation, as in that method is required. Where note, that it ought to be levigated into a most impalpable powder before it is given. Price two skillings an succe.

### CHAR XXXI.

Pracipitatus albus: White Pracipitate.

I. The Quick silver purified, or driven from Sea Salt in a Retort, one pound: Aqua fortis, (made of Kitriel, two parts, Niter one part) two pounds: make a dissolution according to Art: in a long neck a matrass, and be caroful to avoid the sumes; in the mean season prepare a Brine of Saa Salt and fair Water, which siltnate, and put sour solution of Merenry into it, so will a white Powder immediately precipitate, which is to be washed from all its Acrimony in warm Spring Water siltnated, then dry it: and keep it for use. Where note that if you use

use spirit of Niter instead of the A. F. it will be the enfier dulcified: also that the Matras be of such a magnitude, as it may not be half full, lest the ebullition should be so great, as to make the matter tun over.

II. This is a real and true Arcanum against the French Pox, and virulent Gonorthoea, and all the dependencies and evil Symptoms; for it deftroys the poyfon and malignity of the Difeate, and univerfally carries away what is malignant and hurtful, evacuating all manner of filth and corruption in the whole Body.

III. It purges fomething more than the Calomelanos, but if given several times alone, vie. without a purging Medicine along, with it, it will flux, as well as that; by either method it is of great force in curing the French Pox, Gonorrhoea, and all venereal Ulcers, as Botches, Boyls, Scabs and Pocky

puffules.

IV. It cures Tettars, Ringworms, Cancers Sores, Itch, Leprofy, by taking it inwardly in a purging Medicament; and mixing it with Oyl or Hogs Lard, and anointing the parts affected therewith; but beware that you anoint not any part of the Stomach or Belly, lest you kill the Patient therewith.

V. And indeed for outward application in the cure of Malignant, and Corrofive Ulcers; Scabs, Itch, and all corruptions of the Skin, no outward remedy surpasses it: mix two scruples or a dram of it with an ounce of Pomatum, and anoint therewith; for eating Herpes, malignant Ulcers, mix as much with the like quantity of Basilicon, and apply it emplaster-wife.

VI. It is a wonderful thing against a stubborn and inveterate Kings Evil, Gout, Dropfy Leprofy;

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against rebellious Agues, vehement Catarrhs, &c. It kills Worms in the Stomach, and those which are generated in the Bowels and Intestinum Rectum. It is a good Medicine, and ought to be esteemed as a Jewel.

VII. If the Quick-silver be disloved in Spirit of Niter, and evaporated, and this three times repeated and evaporated in a glass Matrass with a short neck, and a gradual fire, and this sweetned by often washing in fair warm Water, and then reverberated in a Crucible, till it becomes as red as Coral, you have Arcanum Corallinum, good for all the purposes aforesaid, but much more powerful, and the most absolute Specifick against the French Pox.

VIII. The Dose and way of taking it. The White precipitate is given from four grains to ten; the Arcanum Corallinum from two grains to seven or eight, mixt with some proper purge, let it be given in the morning and once every fifth or fixth day, with observation and care. Price of the White Precipitate four shillings an ounce. Price of the Arcan. Corallinum six shillings an ounce.

#### CHAP. XXXII.

Pulvis Regalis noster: Our Royal Powder.

I. T Ake Scammony, Cambogia, of each two ounces:
Refin of Jalap, Tartar Emetick of Mynscht, of each
an ounce: Elaterium, Cloves, Nutmegs, Zedoary, Cinnamon, of each two drams and a half, make each into a fine
Powder a part, then mix them together, and keep them in a
Glass close stopt.

II. It is a most admirable thing for a Panchyma gogue or Universal purger; so that very few things

exceed

exceed it: it purges and carries off by Stool, but formetimes by Vomit also, if the Stomach be very foul, all humours whether thick or thin, and may be given to both Sexes, whether Young or Old, little Infants excepted, because of its substantial working.

III. I commend the use hereof in the Gout, Sciatica, Dropsy, and Jaundice, beyond most other Purges; for in these Diseases I have had large experience thereof: I once cured a Woman of a most extream and inveterate Sciatica with four Doses of it, given every third or fourth day, taking also in the Interval of Purging our Cordial Pills in Chap. 38. following, and bathing the part twice a day with the powers of Turpentine.

IV. It purifies the Blood, strengthens the Stomach, provokes Appetite, and expels Flegm, Choler and Melancholy. It evacuates Flegm, and other gross Humours from the Head, Joynts, and other remote parts; and has been found of excellent use in old Headachs, Megrims, Apoplexy, Fallingfickness, Vertigo, Melancholy, Carus, Frenzy, Madness, Lethargy, and other such like cold and moist Dis-

eases of the Head and Brain.

V. I have given the Medicine with good fuccess in Quartan Agues, (feldom missing of the cure) black Jaundice, Hypochondriack Melancholy, Kings Evil, and other the like old, stubborn, and rebellious

Difeales.

VI. It is a most admirable remedy against the French Pox; especially if to every ounce thereof you add a dram and half, or two drams of White præcipitate, mentioned in the last Chapter; and so it performs that cure, without Fluxing to a wonder. Otherwise, the prescript it self is scarcely inferiour to any other purge.

VII. Ic

VII. It specifically cures the Scurvy Dropsy. Gout, Jaundice, Cachexy, and Green-lickness it epens all Obstructions of the Stomach Livet, Spleen. Melentery, and Womb: and most diseases of the Womb, proceeding from cold, moilture, Wind Obstructions, and variety of filthy Humours, I have cured therewith to a wonder a for it admirably cleanles and diverts the intentions of that part.

VIII. It cleanfes the Stomach and Bowels from cold, moift, viscous, slimy, and corrupt Humours and all manner of Filth: it prevails in the Dropfy, evacuates Water powerfully; and cures any furfeit, if

exhibited upon the first coming thereof.

IX. It kills Worms, whether in Old or Young; is an excellent thing against all Agues and Feavers, by causing the evacuation of the Febritick Matter. It cleanses, strengthens, and corroborates all parts of the Head and Stomach, carries off Catarrhs, fortifies and recruits the Memory, acuates the Senses, and prevails against Tartarous Discases, Melancholy, and the Kings Evil; for which last Difease, I esteem it one of the best Purges.

X. It provokes the Terms powerfully, more efpecially in cold and moift conftitutions, and is good against the Whites in Women, and other foulness of the Womb, by purging away the filthy mat-

ter.

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XI. Being often taken, they cause old Ulcers. running Sores, inveterate and malignant Fistula's. Kings Evil Sores, Apoftems, &c.fpeedily to heal, by purging away the cause which seeds them. Indeed this our Royal Powder performs desperate cures. abport to a Miracle.

XII. The Dofe and may of taking it. It may be given from ten grains to twenty, and to twenty five or thirChap. 33. Pulvis Antifebriticus noster. 71

ty grains in strong Bodies: mix it with the Pap of an Apple, or a stew d Prune, or with a little Conserve of Roses, or a little Syrup, and so let the Patient take it early in the morning, having ready some Broth or Posset drink to take liberally after it; and so to keep his Chamber for that day. Let it be repeated every third, fourth or fifth day, as the Sick is able to bear it, and to be continued sour, six, eight or ten times, as you shall see occasion. Price sive shillings an ounce.

#### CHAP. XXXIII.

Pulvis Antifebriticus noster, Our Pomder against Fea-

I. T Ake Antimony five parts: Common Salt four parts:

Salt of Tartar one part; make all into a most subtil powder: put it by spoonfuls into a Crucible red fire hot, and when it slows like water, take it off, is will you have at bottom, an Antisebritick Regulus which, washed from the Salts, womits not at all. Take of the Regulus tractus onnees: of the pulvis Bezoardicus in the following Chapter, three ownees: the Regulus being in sine Powder, mixthem, and keep it close in a Box with Screws

for use, or in a Glass stopt close with a Cork.

II. This is a famous medicament against Feavers of all forts, having scarcely any equal. I have given it more than two hundred times with unparallel'd success: it takes off the Feaver beyond expectation at three or sour times taking, and sometimes with a single Dose, as if it was done by Incantation: nor can I tell that ever I gave it in a Feaver in vain. I communicated it to Dr. Henry Green, late of Enfeld, who by Letter gave me this following account of it.

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III. Octob. 23. Anno. 1683, Worthy Sir, I have usefed your Antifebritick Powder (which you gave me notice of) in Feavers, with great benefit. It is so far from Vomiting, that I have administred it to Children, when they have vomited, and it has turned downwards. Stools that have been inodorous before, have been strangely offensive after it. It has taken off Feavers sometimes at a Dose. I have given it at least fifty times, and its effects have been always innocent, for the most part effectual, sometimes stupendious. I doubt not but it may be extended to other Diseases with equal Advantage. Thus far Dr. Green

IV. It is fomething Sudorifick, if given for that purpose; but for the most part works downwards first, and afterwards provokes Sweat: it is prevalent against all putrid Feavers, Measles, small Pox, Calenture, spotted Feaver, sweating Sickness, the

Plague, and all other venomous Diseases.

V. It is a great aperitive and Deoppilative, opening all Obstructions of the Stomach, Liver, Slpeen, Mesentery, Reins, Womb, and other parts. It is good against stoppage of the Terms, Green-sickness, Drop & Melancholy, Scurvy, Jaundice, and Gout.

VI Mixt with Venice or Chio Turpentine, it prevails against old Gonorrhoeas, the Whites, and other diftempers of the Reins, Womb, and seminal Ves-

fels.

VII. It cleanses without violence, resists putrefaction in the highest degree, fortises the Stomach, correctscrudities, strengthens the universal Man, purifies the whole Mass of Blood, scours and clears the Bowels of filth and viscous Humours, by gently Purging, and brings health in an unknown way.

VIII. It refifts all difaffections of the Heart, Brain, Liver, and other parts of the humane Body, which ferve for the conservation of life; for it has

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a substance and quality agreeable with ours, it is very profitable in Hectick-Feavers, by taking away the præternatural Heat, and restoring the Radical moisture, and desends the very essence of Human Nature

against the Assaults of all its Enemies.

IX. The Dose and manner of using it. You may give it to Children from fifteen Grains to a scruple or more: to elder persons from a Scruple to two scruples: and strong persons may take it to a Dram. Or twenty, or twenty five Grains may be given morning and evening for eight, twelve or twenty days together as you see occasion, You may give it made up into a Bolus with a little Gelly of Harts-horn, Conserve of Quinces, pulp of Prunes or a littleHoney. Or you may cause it to be exhibited in a spoonful of any convenient Syrup. Price eighteen pence an ounce,

#### CHAP. XXXIV.

Pulvis Bezoarticus noster: Our Cordial Powder.

I. T Ake Bezoar Minerale, Bezoar Oriental, Bezoar Animal, of each one ounce: Cochinele, Saffron, Votatil Sal Armoniack, of each two Drams: Camphir, Volatile Salt of Harts-horn, of each one Dram: all being in subtil Powder, mix them, and keep them close in a Box

with a ferew.

II. This is an excellent Antidote against the Plague, all Pestilential and malign Feavers, as the Measles, small Pox, Purples, or spotted Feaver, the Calenture, and all other burning and continual Feavers whatsoever. It cures Agues of all forts, whether Quotidian, Tertian, or Quartan, single or double, being given before the Fit, so long as that the Sick

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may fall into a fweat before the cold Fir comes on.

III. It sweats powerfully, drives out the small Pox and Measles after a secure and admirable manner: it results Putrefaction and Poyson, refreshes all the Senses, comforts the Heart, revives the Spirits, and strengthens the Body and all its parts, after a strange and wonderful manner, being a true friend to Nature, and acting according to her Laws,

IV. It gives ease in all manner of Pains, whether in the Head, Stomach, Liver, Spleen, Mesentery, Reins, Womb, or Joynts, or indeed in any part of the body. It gives present ease in the Pleurisie, Colick, griping of the Guts, Wind, pains and stitches in the sides and Stomach, for which diseases

there is scarcely a better remedy.

VI. It cures the Rickets in Children, strengthens a weak back, takes away fits of the Mother, helps fainting and swooning Fits, preserves Women with Child from miscarriage, comforts the the Head, Brain, and Nerves, strengthens the stomach, causes a good complexion, and digestion, resists Vomiting, and relieves languishing nature almost to a Miracle.

VI. It is a great and good Medicine against all manner of Coughs, Colds, Ashma's, Wheeling, shortness of breath, difficulty of breathing, obstructions of the Lungs, defluxious of Rheum, Ptisicks, and such like Diseases. It drys a cold, moist, Rheumatick constitution of Body; yet after a strange and wonderful manner, cures pining away, Hecticks and Consumptions whether in Old or Young.

VII. It is a most especial remedy against the fallingfickness, Apoplexy, Convulsions, Cramps, Lethargies, Palsies, Vertigoes, and other diseases of the Head; It kills Worms in Children, bringing them away. I always give it to Children in the Gripes with good fuccess. It Cures the Gout: Melancholy, and the Spleen, and restores the natural Functions, curing those diseases radically, so that they never return again: It is also a specific against the Leprosy, Scabs, and all forts of breakings out.

VIII. It is very good against a Leucophlegmatia, and the first beginnings of Dropsies, in which diseases it is wonderful; for it powerfully discharges the Spleen and other parts of the lower belly, by

Urine and Perspiration.

IX. The Dose and manner of taking it. You may give it principally morning and night; but if there be much weakness, and great necessity require it, you may give it three, four, five or fix times a day (but then the dose ought to be much the less:) The common dose given once a day, viz, at night going to bed is from twelve Grains to twenty four or thirty, according to the strength and ability of the patient : if you give it twice a day, the dose is from fix Grains to twenty: if oftner, as three, four, five or fix times a day, from five to ten Grains. Give it in some proper Syrup; and let the Sick drink a dram of our Aqua Bezoartica after it : and if the occasion requires it, let it be exhibited ten, twenty or thirty days together, making the Sick sometimes sweat well aponit. Price ten foillings an ounce.

## CHAP. XXXV.

Hercules noster, seu Panacea nostra: Our All-heal.

I. T Ake of Aurum Vita four ounces, choice Bezoar minerale twelve ounces: Hungarian or Spanish
Quick-silver pure and without filth, sixteen ounces: mix
them together, and grind them constantly for three days,
till they are perfectly mixed, and a very subtle powder of
a most deep black colour; then digest in a gentle Balneo
Marix for forty days, and keep it in a Glass close stops for
use.

II. This is a wonderful Medicine, for it expels all putrid humors from the Body, whether they be generated of Blood, Choler, Flegm or Melancholy, purifying the whole mass of Blood, and expelling the feculencies thereof through not only the Bowels, but also through the pores of the Skin.

III. It strengthens the Brain, acuates the Senses, and comforts the Nerves; being an admirable thing against the Headach, Megrim, Vertigo, Apoplexy, falling Sickness, and other disaffections of the Head and Brain. It is found also by experience to be a

fpecifick in the Colick.

IV. Mixt with Turpentine and so taken, it is dinretick, provokes Urine, cures the Disury and Strangury, and miraculously gives ease in the Stone and Gravel, whether in Reins or Bladder, being taken for some days; so that its effects are thought by some to be Magical.

V. Outwardly applyed in an Oyntment, it is found to be an Arcanum against the Gout, easing all the Pains thereof to a wonder, as also all other

Pains

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Pains in the Nerves, Tendons or Muscles: it disfolves all hard and scirrhous Tumors, cures inveterate Ulcers, Cancers, scrophulous Tumors, and such like: but it ought also to be taken inwardly at the

fame time, as hereafter directed.

VI. It prevails against Fistulas, running Sores, Tettars, Ringworms, Scabs, Itch, rebellious Herpes, Scurff, Morphew, as also all manner of Botches, Boyls, Pustles, Ulcers, Gumms, Tophs, Nodes, and other malign symptoms proceeding from the French Pox.

VII. It cures all disaffections of the Womb, as fits of the Mother, barrenness, coldness, and slipperiness of the Womb, Ulcers thereof, &c. clean-

fes it of evil Humors, and strengthens it.

VIII. It quickens the Senses, fortifies the animal Functions, comforts the Spirits, chears the Heart, generates subtle and pure Blood, strengthens all the principal Members, recreates the Mind, and makes a

chearful countenance.

IX. This Medicine purges not of it felf, but strengthens and restores by its balsamick sweetness; cleansing the whole mass of Blood, from all mucous and serous Humors; it cures the Leprosie, and is a special Arcanum against that Disease. It is not only a perfect cute for the Gout and Sciasica, but it takes away Nodes, discusses Tumors, and absolutely eases all pains of the Joynts whatsoever.

X. It repairs the whole Man, reftores and purifies the radical Moisture: cures all forts of Fevers, continual and intermitting, whether Quotidian, Tertian or Quartan; and expels all foreign matter, either through the pores of the Skin or by the Emun-

ctories.

XI. It is a specifick not only against Cancers and Scrophula's, the which it heals in a short time; but it is also a perfect Cure against the French-Pox, with all its attendants, as Gonorrhoeas, Whites, Bubo's, nocturnal Pains, and the like, helping the stagmation of the Humors in any part of the Body.

XII. The Infufion of it in Wine, drunk a pint a day for some time, strengthens and fortifies the Stomach, takes away Loathing and Vomiting, causes a good Appetite, kills Worms in Children, and expels them; heals all internal Wounds, whether in the Bowels or elsewhere, dissolves coagulated Blood, cures the Phthisick, Ulcers of the Reins and Bladder, and other the like internal Maladies.

XIII. The Dose and manner of taking it. If you design to sweat with it, you may give from a Scruple to half a Drachm in a little of our Treacle, letting the Patient be in his naked Bed, and well covered; drinking now and then after it a little Glass of Sack. If the intention be otherwise, and it be given against the French-Pox, Gont, Leprosie, Cancer, Kings-evil, Herpes, or fuch other malign and inveterate Diseases, you may give it at Night going to Bed, from a Scruple to two Scruples or more, made into a Bolus with a Conserve of Roses; or you may mix it with the pap of an Apple, Syrup, or the like, and so give it, (but not in any thin body, because it will be apt to fettle, and fo hang about the Mouth and Throat:) This done, give the next Morning some proper purging Pill, Powder or Potion to carry it off.

XIV. You may give it every other, or every third or fourth day, as you see the Body will bear it, it will truly do Wonders, if you prosecute the in-

tention

tention of cure rightly: and you may give it for eight, or ten, or twelve times one after another, as you fee need requires. If you give it often, ( without a Purge following it the next Morning) it will flux: which of the Methods is best to follow, you must consult your own Experience and Reason; confidering also the strength of the Patient, and

inveteracy of the Difease.

XV. During the Cure of the Disease the Patient ought to have a Diet-Drink to take, which you may make thus. Take of this our Hercules or Panacea five onnces: Canary two quarts; shake them together, and let them stand in a warm Insusion for a week; shaking the Glass twice a day: then being well settled, pour off the clear Wine ( which will have neither colour, taft nor smell, more than it had when it went on ) and keep it for a Diet. Dose a quarter of a pint in the Morning; and so much at Night again, going to Bed, on those days the Sick does not purge. This much exceeds a Guajacum and Sarfa Diet. This Diet Drink you must renew, by putting the like quantity of fresh Canary upon the same Powder; and you may repear the Infulion upon the same Faces seven of eight times, which will be fufficient for any ordinary Cure; and to long it will hold good, and make the Infusion strong enough.

XVI. As to the outward use of it, you may strew it alone upon Sores, Ulcers, Scabs, &c. and then apply it mixt with some Oyntment or Balsome, as Basilicon, Nutritum, Pomatum, our friendly Balfome, &c. But if, it be to any place pained, which is not raw, only mix it with the Oyntment or Balfome, and fo lay it upon the place. Price eight Shillings

an ounces

## CHAP. XXXVI.

Antidotus, seu Theriaca nostra. Our Antidote or Treacle.

I. T Ake powder of Vipers ten onnees: Opinm extrated, strained and inspissated with juice of Limons, wight Ounces: Bezoar mineral, Sassron, Cochinele,
Contrayerva, Virginian Snakeroot, Cinnamon, Cloves,
Mace, Nutmegs, Zedoary, Cubebs, Camphir, of each four
ounces: Myrrh, Aloes, Ginger, Pepper, Cardamomi, Spiknard, Bay berries, Winters Bark, Elecampune, Castoreum, volatil Salt of Amber, oyl of Nutmegs by expression,
of each two ounces: Chymical oyl of Aniseeds, Caraways,
Cloves, Lavender, Pennyroyal, Rosemary, Sage and Wormwood, of each one ounce: Virgin Honey, melliginous extract of Juniper Berries, of each eleven pounds and a half:
these things being in subtle Powder, which ought to be
powdred, mix them over a gentle Fire, and make an Elestuary according to Art.

II. This Antidote or Treacle has all the Virtues of Mithridate or Venice Treacle; and much more powerful to all the same intentions and purposes.

HI. It notably restores in Consumptions, expek Wind, strengthens the Stomach, and causes a good digestion; comforting all the principal parts, as Head, Brain, Stomach, Heart, Liver, Spleen and Womb, chearing all the Spirits, Natural, Vital and Animal.

IV. It causeth Rest, eases all Pains, stops all Defluxions of Rheum, and is a great Cordial, restoring the Scrength and Spirits in fainting and swooning Firs. It prevails against all forts of Feavers, and diseases proceeding from corruption, putrefaction and viscous tartarous Humers.

V. It

Chap. 36. Antidotus, seu Theriaca nost. 725

V. It helps Afthmas and difficulty of Breathing, eafes an old Cough, helps Inflammations and Obfituctions of the Lungs, Pleurifie and pain of the Stomach. It flays Vomiting, and is a special Antidote against Poyson, Pox, Plague, biting of venemous Beafts, and all malign Fevers.

VI. It is a specifick in the Colick, griping of the Guts, all forts of Fluxes of the Bowels and other Diseases of those parts. It stops the overslowing of the Terms, and all other Fluxes of Blood in any part; as also inveterate Catarrhs, and distillations of

Rheum, spirting Blood, &c.

VII. It is powerful against all epidemick Diseases, as the Pestilence, spotted Fever, Measles, small Pox, Calenture and sweating Sickness, expelling the Poyson and Malignity of the Disease through

the pores of the Skin by fweating.

VIII. It fortifies the Heart, revives the Spirits, comforts the Stomack, and strengthens the whole Body, helping digestion, and causing a good Appetite: being also an admirable thing against Pains and Stitches of the Breast and Sides, as also against

hypochondriack Melancholy.

It

IX. It is a most excellent thing against Pains proceeding from the Stone, Gravel or slimy, viscous and tartarous humors in the Reins, Ureters or Bladder, giving rest and quietness, with much safety and pleasure. It is a specifick against the Gout and Sciatica, inwardly taken and outwardly applyed; there are but few Medicines better than it for those purposes.

X. It is a good thing against the Head ach, Megrim, Palsie, Madness, Frenzy, defluxions upon the Eyes, Teeth or other parts; it is profitable against Rheumatisms, Surfeits, scorbutick Pains, Dropsies,

Aaa 3 Jaundice,

Laundice of the Mother and other Diferes proceeding from Wind and Vapours ; as also against all forts of exeruciating Torments in any part of the

Body.

XI. The Dafe and way of giving of w. To Infants you may give it to half a scriple, to Children from a year to two or three years old, from half a scruple to a feruple or more: from two years old to five or fixt you may give from a formule to two foruples. To elder persons according to their Age, from two feruples to four scruples or two drachms. It may either be swallowed alone, or dissolved in a Glass of Sack; or other proper Vehicle. It is best given at Night going to Bed, and if possible sweating aponit. You may taken two, four, fix, eight or ten times, or more, as you fee occasion. Price twelve pence an ounce. ill. It forme

# Bedy, helping HVXXX A A H O

Theriaca Londinensis nostra: Our new London Freacle.

TAke Opium extracted with Spirit of Wine, and inspissated, fix ounces : dissolve it again in Spirit of Vinegar or junce of Limons, and inspissate: then dif-Solve again in Oyl of Tartar per deliquium eight ounces, and inspiface to the consistency of Honey. 2. Take Spanish juice of Liquorice, juyce of Alkermes, solid extracts of Elecampane, Gentian, Bay Berries and Zedoars, of each two ounces; disolve them in so much Spirt of Wine, as may make them of the thickness of Honey. white Poppy Seed, Contrayerva, Virginian Snakeroot, Indian Spikenard, Myrrh, Ginger, Pearl, Coral, Cochinele, red Coral, Bezoarstone, volatile sal Armoniack, of each two ounces: Chap. 37. Theriaca Londinensis nost.

727

ounces: Musk and Ambergrife, of each one drachm, make all into a fine impalpable Fonder, according to Art, which mix with Rezoat Minerale, Bezoat Solare, & Bezoat Animale, of each two ounces, 4. Take Chymical Oyls of Anife, Sassafrass, Caramays, Juniper, Rhodium, Cloves, Rossmary, Amber, Cinnamon and Roses, of each an ounces, in which dissolve Camphir two ounces, with which mix Oyl of Nutmegs by expression, Balm of Gilead, Essence of Vipers, of each two ounces, 5. Take clarified Honey twelve pounds, put to it the dissolved Opium, &C. then the dissolved extracts, mixing them well; after sprinkle in the Powders, stirring them exquisitely over a gentle heat, which may melt the Honey: Lasty, adding the Chymical oyl, let them be also perfectly mixed, and compleat the Electuary according to Art.

II. This is the great Secret with which we cured several hundreds of the Plague in the last great Visitation in London, Anno 1665, and to the best of our remembrance, not one person dyed thereof, to whom we gave it. Several persons are now living, who had Plague Spots came out upon them (while others lay dead at the same time in the same room) and by taking hereof were saved from the

Jaws of Death, and cured.

HI. One William Tayler (who can yet testifie it) expected to be the next after his Mother and two Sisters, who lay dead by him of the Plague; he being full of Spots, like to them upon the dead persons; yet upon the taking hereof recovered, but bore the Spots upon him, for near fix Months after, to the view of several people; which as a famous testimony of the worth of this Medicament, we could not but communicate to the World.

IV. It revives the Spirits, chears the Heart, recreates the natural Powers, strengthens all the fun-A a a 4 ctions

ctions and faculties of the Body, exhilarates the Mind, stops the most vehement Catarrhs, is excellent in a Rheumatism, and mightily restores in Confumptions.

V. It is an Antidote against all manner of Poyson and infectious Diseases; destroys the very essence of Venoms, gives rest and ease, and takes away all manner of Pain in any part of the Body, whether fixed or wandring.

V1. It is a most admirable thing against all manner of hot, burning and malign Feavers, of what kind foever, as Measles, Small Pox, spotted Fever, Calenture and sweating Sickness, being carefully given, and the Patient made to sweat well upon it.

VII. It is prevalent against Coughs, Colds, Asthma's, Phthificks, Obstructions of the Lungs, inward Bruises, spitting or pissing Blood or Matter, for which it is to be commended as a Jewel: and truly in all manner of Fluxes of Blood, whether by the Mouth, Nostrils, Reins, Bladder, Womb, or Hæmorrhoids, it is a most admirable thing.

VIII. It is found by long experience to be admirable in Headachs, Megrims, Vertigo's, Fallingfickness, Convulsions, Palsies, Gouts, Sciatica's, Pleurities, Colick, Obstructions of the Spleen, and Wind, whether in the Stomach, Bowels or Womb.

IX. It stops the overflowing of the Terms and Whites in Women; and is a certain remedy in all violent Lienteries, Dysenteries or bloody Fluxes and Diarrhoeas or Loofneffes, which have been of long continuance, and are hard to cure, or have relifted almost all other Remedies.

X. It is fingular good against the bitings of mad-Idogs, Serpents, Vipers, or any other venomous Leaft; as also against the stinging of Scorpions, Hornets,

Chap. 37. Theriaca Londinensis noft.

nets, biting of Spiders, or the Poyfon of any other Animal, whether, Beaft, Fish, Fowl or Infect.

XI. The Dose and manner of taking it. You may give for Prevention a scruple or twenty grains in a Glass of Sack, at night going to Bed; or if you best like it, in the Morning fasting: But for cure, you are to consider the Age and Strength of the Parient, and so accordingly you may give it from ten grains or half a scruple to half a drachm or two scruples, or more as you see occasion: it is a safe and fure remedy; and by reason of the volatile parts that are in it, it penetrates into, and defends every part.

XII. Let it be given dissolved in Sack, or some other convenient Vehicle, as Aqua Bezoardica, or fome fuch like, and let the Sick be in their naked Bed, and well covered, so as that they may sweat well upon it: let the sweat continue four, five, fix, or more hours, as the Sick can bear it, and let it be repeated again for at least four days; letting the Patient when out of the great Sweat, yet lye in a kind of breathing Sweat; and now and then moisten their Mouth with the juyce of an Orange, or some pleasant Cordial Julep, made grateful with Oyl of Sulphur. Price four Shillings an Ounce.

strong leaf. I be unimplying the Marindal

# CHAP. XXXVIII.

nets, biting of Spiders, or the Poylon of

Landanum Volatile nost. Our Circlial Palls, & Volarile

I The of the heft Thebean Opium thirty onnes, make it into an extract of a middle confiftence with fairis of Wine, and mix therewith ten ounter of the best Venice Treache ; being well mixed add thereto volatile Sales of Mans-skul, of Harts-bonn, of Sal Armoniack, of Amber, of Tartar, and of Vipers, of each one source: mix them well in a Wooden Mortar, and keep them fowe days: then add extracts of Pirginian Snake Room, of Contragerous, of Zodomy, of Saffron of Cafeo rum, of Mithridate, of each two ounces and to half. Chymical Oyls of Cinnamon, of Cloves, of Nutmegs, of Resemany, of Sassafras, of Wormwood, of Limons and of freet marjorum, of each half an ounce: being all well mixed together, keep them fo, till the fermentation is compleanty absolved, which done, bring it into the just consistency for a Mass of Pills, by adding Bezom Oriensal, Bezoar Mineral, Camphir, Coshinele, of each a like quantity in subsil Powder: then keep it close in Wooden or Silver Boxes with screws for use.

II. This is the greatest and most excellent preparation of all the *Opiates* yet invented, being made of a fermented *Opiam*, filled with volatile Salts, whereas in all other preparations of this kind, the Opium has been crude or ill prepared, and only corrected with a nauseous Oyl, and a fixt Salt, or no Salt at all.

III. It is Cephalick, Neurotick, Stomatick, Cardiack, Splenetick, Nephritick, Hysterick and Arthritick, Antifebritick, Alexipharmick, Analeptick, Sudorifick

Chap. 38. Laudanum Volatile nost. 731

Sudovifick and Anothyne it is a great Medicine, and almost of infinite virtues, valily transcending all o

the medicaments of like kind

IV. It is an absolute cure for spitting of Blood, beyond all other things yet practifed and stops all other distillations and Fluxes, whether of Blood, Rheum, Terms, Whites, Gonorrhoea, &c. strengthning and fortifying the parts, and diverting the matter another way.

V. It is good in all forts of Feavers, Watchings, reftlefness, Melancholy, Head-achs, Megrims, Frenzy, Madness, Epilepsie, Convulsions, fits of the Mother, Pleurisie, Vomiting, Colick, weakness of the Bowels, Diarrhea or Loomess, Hepatick Flux, and other

differencers of those parts.

VI. It is excellent against the Grut in Arms, Heads, Hips, Knees, and Peet alleviating the pain, affwaging the tumour, and causing the humour to vanish by perspiration through the Pores; It alters the layers of the Body, destroying the Acidity of the Neurotick moisture, which constitutes the Tarrators matter thrust our into the joynes.

VII. It gives admirable ease in all Nephrick pains proceeding from the Stone, Sand, Gravel, Slime, or viscous marter lodged in the Reins, Uneters and Bladder, in which afflictions, it is truly the most

freedy, prevalent, and efficacious Remedy!

VIII. It provokes fweat powerfully, and expels all manner of poyfon and malignity from the Heart, whether it proceeds from the bitting or ftinging of any venemous or poyfonous Creature, or from the contagion of any Epidemiek, or malignant difease, as the Measles, small Pox, Calenture, sweating Sickness, spotted Feaver, or other malign and contagious disease, yea the Plague it self.

IX. It

IX. It mightily strengthens the Heart, revives all the Spirits, Natural, Vital, and Animal, and fortifies the whole intire Man to a Wonder: it is extream good against Melancholy, melts frigid, clammy and viscous humors, and thereby opens manifold ob-

Aructions.

X. It helps vehement Coughs, Colds, and distillations upon the Lungs, or other parts, making the thin humour thick, and so causing it to be the more easily expectorated; it prevails also, not only against all Fluxes of the Head, as Catarrhs &c. and other Fluxes of the Bowels, as the Diarrhoea or Loosnes, bloody Flux, and Lienteria, or Flux of chyle and matter; but also against all fluxes of the Womb; and fluxes of humors to the Joynts, or in old and running Sores, where the Ulcer is not only rebellious, by reason of the malign and evil quality thereof, but the flux of matter flowing to it is so impetuous, to result all other remedies.

AT. It is a fingular good thing against the Seury, whether in a hot or cold constitution, it takes away the Scorbutick pains, and other symptoms, eradicating the disease, root and branch, to a Miracle.

XII. It is eminent against Palpitation of the Heart, Swooning, trembling, and other passions of the precordia. Sickness at stomach, want of Appetite, and indigestion, loathing of food, heart-burnings, vomiting, and other distempers incident to those parts.

XIII. It is a most excellent thing in all burnings, continent, or continual Feavers, for it interferes immediately with their original cause, and by opening the Pores of the skin, and causing sweat, it forces a transpiration of the Febritick matter, and so takes away the preternatural heat.

XIV. It

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XIV. It is a very good thing against the Leprofy, Scabs, Scurff, Morphew, Tettars, Ring-worms, Boyls, Botches, and other breakings out; by loosening the too strict jointing of the blood, from a combination of Acid or fixt Salts with sulphurous particles; whereby, causing a fermentation, it separates the Recrements and Impurities thereof through the pores of the Skin, and so sweetens it.

XV. It prevails against disaffections of the Spleen, and Hypochonders, troubles and discontents of mind, it opens obstructions in the Liver and Mesentery, and is good against a scirrbus of those parts; or any

other hard and painful tumour.

XVI. It is a Specifick almost in all diseases which may be fall the Head, Brain, Nerves, Womb, or Joynts; for that it miraculously strengthens those parts, and recreates the Animal spirits. It is very profitable for Women that lye in, and most stupendiments takes away the Afrec pairs.

oully takes away the After-pains.

XVII. It provokes Urine remarkably, takes away the heat and sharpness thereof, eases the pains of the back and Reins, cures the Disuria, Iscuria, and strangury; and is profitable for such as are troubled with weakness, indisposition of Body, Lassitudes, or languish under hecticks, Consumptions, Poyson, &c.

XVIII. It is the most potent remedy in the world against Catarrhs, stopping all forts of Distillations whatsoever, salt, sharp, thin, &c, afflicting the

Throat, Lungs, and Aspera Arteria.

XIX. It destroys the very effence of Venoms, gives rest and ease, causes pleasant sleep, and takes away all manner of Pains, even the most acute, in any part of the body; for which purpose it is a kind of Divine help, & quasi ultimum Assum.

XX. The Defe and way of taking it. You may give it at any time of night or day when there is occasion for it: but if he constantly taken, or given in a disease, which requires the long taking of it, you ought always to give it last at night going to bed. You may make it up into a small Pill, and so take it in the pap of an Apple, stew'd prune, or with a little Syrup, or Ale, Beer or Wine, as best pleases the Patient, drinking after a glass of drink or Wine, and so bying down, to be covered

warm, and to repose upon it.

KKI. As to the Dose of it, you may begin with one Grain (according to age and strength,) and so increase the dose half a Grain every fourth or fifth day, till such time (if the necessity and vehemency of the Disease require it) as it is augmented to a scruple or more, for by this gradual increase, the dose is given without danger; and having come to the highest Dose, you may continue it as many days or weeks as you see need for; and then gradually again to diminish half a grain at a time, till you come to the lowest Dose again.

XXII. In extremity of Pain you must begin with a larger Dose, viz. with two or three grains, or more, and so encrease it as before directed. To Children of two, three, four or six Months old and upwards you may begin with a quarter of a grain, and so encrease a quarter of a grain by degrees till it comes to a grain or more. In chronick Diseases the Patient is sometimes forced to take it for several Months together. Price sixteen Shillings

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#### CHAP XXXIX

Extractum Pectorale nostrum. Our Pectoral Extract.

TAke Extract of Liquorice, Lozenges of Sugar pearled, of each one pound : Extract of Hylop, white Sugar Candy, of each half a pound: Lac Sulphuris, Crystals of Nitre (made by disfolution in Spirit of Nitre) of each a quarter of a pound: Sugared Crystal Mineral, Ginger in fubile Powder, of each two ounces: Oyl of Cloves, an ounce: Oyl of fweet Fennel Seeds, half an ounce: with glair of Eggs, a sufficient quantity, make a Mass, which form into little Pills, Rouls or Lozenges, according to Art, and fo dry them.

II. This is a Medicine very pleasant, and therefore to be held in the Mouth to dissolve by degrees, that it may leifurely diftil down the Throat: It is a specifick in Coughs, Colds, Asthmas, Whefings, shortness of Breath, difficulty of Breathing,

es. and gives wonderful ease to admiration.

III. It diffolves congealed Flegm in the Thorax, takes away the tickling in the Afpera Arteria, heals tawness and soreness of the Lungs, Breast and Stomach, and is an admirable thing in all obstructions or stoppages of the Breast and Lungs, causing easie

expectoration.

IV. It is good not only in vehement Coughs and Afthmas, but also in Phthisicks, Ulcers of the Lungs, spitting of Blood, inflammations of the Lungs, &c. cooling and taking away the preternatural Heat, stopping any flux of Blood or humors falling to, or proproceeding from those parts, and withal healing the Ulcers thereof.

V. It may be called the balfam of the Lungs, for it heals wonderfully, eafes pain, quenches thirft, and allays the heat of Feavers: it strengthens the stomach, helps digestion, and causes a good appetite to food.

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VI. It is a very good thing to expel wind, whether in the Stomach or Bowels; and although it is good against Feavers, and takes away preternatural heats; yet it strengthens and confirms the native heat, chears the heart, and revives the spirits.

VII. It absorbs the acid humour, is prevalent against the stagnation of the blood and humours, dissolving all Coagulums, and sweetning the whole Sanguineous Mass, thereby destroying the very root of all Scorbutick, Hysterick, Convulsive, Arthritick, and tartarous diseases.

VIII. It is good against Sand and Gravel, Slime, or viscous humors in the Reins and Bladder, takes away the heat of Urine, and difficulty of making water; and is found to be of good use in a prevailing and virulent Gonorrhoea.

IX. It is a very good thing against pains and stitches in the side, foreness of the Throat and Jaws, piffing of Blood, vehement Catarrhs, distillations of Rheum, and such other like sluxes of humors, falling upon any of the noble parts.

X. The Dose and manner of taking it. It may be taken freely, and be held in the mouth all the day long (and all the night too) if need requires, and therefore the dose is uncertain, and needless to be limited: the way of taking it, is to let it dissolve in the mouth, and so to swallow it by degrees as it dissolves. But this is to be noted, for the benefit

Chap. 40. Balfamum Sulphuris noft. 737 of the Sick, that during the whole time of taking of this extract, the Sick ought to take every night going to bed one of the Cordial Pills in the aforegoing Chapter, as is there directed; and if the Cough, Afthma, Wheefing, Prifick, spitting of Blood, Catarrh, &c. be very vehement, to take every morning fasting twenty or thirty or more of our Cordial drops: (in Chap. 9. aforegoing) in a glass of Canary, Beer, Ale, &c. as the Sick best likes, so will you not fall of your expectation, but the success of the cure will be according to your defire. Price fix pente an onnce:

# CHAP. XL.

Balfamum Sulphuris nostrum! Our Balfam of Sulphur.

I. T Ake Lac Sulphuris five ounces: Chymical ojl of Anifeeds thirty ounces: mix them, and in a glass body boyl them so long, till the ojl has perfectly extracted the Tincture of the Sulphur of a glorious red colour, which will be about such time as the oyl shall be boyled half away: then decant the Balsam and keep it for use. Here note, i. That some make this Balsam only by Digesting and Circulating, but done that way, it will be very long and tedious.

2. That it may be made in like manner with Chymical oyls of Fennel Seed, Carrawys, Juniper Berries, Limons; Oranges, Rosemary, Cloves, &C. or with any of these mixt together in equal parts; as take oyls of Anniseeds, of Carraways, and of Fennel Seeds, of each ten ounces, Flowers of Sulphur sive ounces; &CC.

II. This is a most perfect Ballam, and a great pectoral, heating, drying, and preserving from Putrefaction. In it are all the virtues of the natural Balsam, and the greatest conservative power, that can

be found in any Medicine.

III. It is a great dryer, excellent good in moil Ulcers, whether inward or outward: it is excellent in Coughs, Colds, Afthmas, pains of the fides and Spleen, foitting of Blood, Ulcers of the Lungs, Palfies, Convultions, Gouts, Struma's, or Kings Evil, Confumptions, &c. being inwardly taken, and outwardly applyed.

IV. It strengthens, resists Malignity and Poyson, is good against the Plague, all sorts of Pestilential and malign Feavers, as Measles, small Pox, Calenture, spotted Feaver, &c: it stops all sluxes of the Belly, Womb, or Yard, with great security, and drie

up moist Ulcers.

V. It is a transcendent medicine in all diseases of the Lungs; it not only heals their Ulcers, and stops. Coughs, but smooths the roughness of the Windpipe, helps Asthmas, shortness of breath, difficulty of Breathing, Wheelings, Hoarsness, and all other disaffections of the middle Ventricle.

VI It is a powerful thing for the removing of Catarrhs, prevails against a Pleurisy, the Colick, Epidemick diseases, Apostems, and putrefaction not only of the Breast and Lungs, but in any part of the whole body: It is also an admirable thing to a

noint with for Ruptures in Children.

VII. This medicine is dedicated to the Lung, and is as a fire to dry up their fuperfluous humidities: It corrects the fhampness of acid juyces, abates their acrimony, and sweetens the Blood, and nervous juyce.

VIII. It

Chap. 40. Balfamum Sulphuris nost. 739

VIII. It is good against the Cachexia, cold and moist diseases, Green-sickness, and she Scurvy: it is a precious Balsam, cures old aches and pains, the Sciatica and Gout, as also all fores and Ulcers both old and new to admiration. It is a wonderful remedy, and an universal deobstructer, opening all obstructions of the Stomach, Lungs, Liver, and Spleen; but all its virtues are not here to be enumerated.

Esteem it as a Jewel.

It

IX. The Dose and way of taking it. You may give from three drops to fix, eight, ten or twelve or more, according to the age and strength of the Patient: It may be taken twice a day viz. in the morning fasting, and at night going to bed: but if the disease be vehement, you may give it also an hour before dinner. You may give it in any specifick vehicle; but it will be best to swallow it down in a spoonful of Syrup, more or less, and then to drink a glass of Wine after it, if the Patient so pleafes.

## CHAP. XLI.

Ballamam Amicum nostrum. Our Friendly Bal-

I. T Ake blood red oyl of Hypericon twenty four ounces: Venice or Chio Turpentine twelve ounces : Rofin, Wax, of each nine ounces : ofl of Nutmegs by Expression, Balfome of Pers, of each fix ounces: liquid Styrax Strained four ounces : Gum Elemi deparated, fat Myrth in Powder, of each three ounces: Frankincense, Refmous Scammony, Gum Guaiaci, Balfamum Capivi, Amber, of each two ounces: Mastick in fine Powder, Camphir, Chymical oyls of Rosmary and Lavender, of each one ounce and an half: first heat the oyl of Hypericon, then diffolve therein the Mastick, Myrrh, Scammony, Gum Guaiaci, Frankincense, Wax and Rofin (in little bits) after put in the Turpentine, Balsam of Peru and Capivi, liquid Styrax, and liquid Amber: being dissolved and mixed, put in the Gum Elemi and next the cyl of Nutmegs: all being well incorporated, take the mass from the fire; the heat being somewhat abated, put in the cyls of Rosemary and Lavender, in which let the Camphir be first aissolved, and so stir continually, till all the Ingredients be perfectly mixed, and the Balfam grows cold.

I'. This is inferiour to no vulnerary Balfam whatfoever, but performs whatever any of them all can pretend to: it cures wounds although of the Nerves and Tendons, and that almost in twenty four la ours; it preserves it safe and intire from filth, putre-

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Chap. 41. Ballamum Amicum nost. 74

faction and dead or proud Flesh till it is perfectly healed, which is commonly at once or twice dres-

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MI. It eafes all external Pains in any part of the body, as of the Gout (from a cold cause) Sciatica and fuel like, but much more effectually, if you mix well therewith Venice Soap, a quarter part upon every-application; and it will be yet more effectual if Opium an eight part, diffolved in Spirit of Wine, be added to the same.

IV. Being well bathed upon Sinews shrunk up, it relaxes and comforts them, and causes them to be extended to their due length: laid upon the Stomach for an inward bruise, it is of admirable and singular use, and will be so much the more effectual, if the quantity of a Filbert, be swallowed in the Morning safting, and safting an hour and half after it; and as

much last at Night going to Bed.

V. Anointed upon Ruptures, it confolidates them and is good against old Aches, Strains, withered Limbs, Cramps, Convulsions, Tremblings, Numbness, &c. It eases Pains and Stitches in the Sides, and applyed softens the hardness of the Liver and Spleen. Inwardly taken, it has been found by good experience to give present ease in the Stone and Gra-

vel, whether in the Reins or Bladder.

VI. It affwages pains in Sores, fills hollow Ulcers with Flesh, and heals them speedily, producing a Cicatrize, it safely heals Wounds without danger of festring. And if upon occasion you mix with it a tenth part of pure sine prepared Verdigrise; or one drachm thereof to one ounce of this Balsam, it will more excellently heal all manner of old Ulcers, hollow cavernous Sores and Fistulas whatsoever, taking away the callous, proud or dead Bbb 3 Flesh,

Flesh, the Synavia or joynt Water, or any other impediment which may hinder the healing. The Verdigrise for this purpose is only a tincture drawn with Spirit of Vinegar, and then the Spirit evaporated to drynes.

VII It is an excellent thing for the cure of all manner of outward Swellings, Burns, Scalds, Cuts or Wounds, Textars, Ringworms, Morphew, Scurf, Pimples, Scales, Leprofie, Puffes or

any other Breaking whatfoever.

VIII. It strengthens weak Limbs, helps Lameness, cures the biting of mad Dogs, Pallies and Gouts in Hands, Arms, Legs or Feet, or any other outward Pain in any part of the Body though never so

great.

IX. It is a truly noble Balfam, doing of it felf all the intentions of healing: It comforts the Nerves and Joynts, and speedily cures old Ulicers and other Sores, proceeding from the Kings Evil. It ripens Swellings, breaks Apostems, cures broken Bones, breeds Flesh, and speedily skins any Sore, not suffering Corruption, Putrefaction or deadness therein.

X. Several who have been lame of their Limbs, many years, by the conftant use of this Balsam for some time, have come to the perfect use of them again. And others who have had old running Sores and Ulcers upon them for almost twenty years, have been cured by the use hereof, almost to a Miracle. Children also troubled with the Rickets or Kings-Evil for a long time, have been cured herewith, beyond expectation.

Chap. 41. Balfamum Arcanum noft.

743

XI. In a Word, This our friendly Balfam supplys the place of all other wound Balfams, as also is effectual in all cases where other Oyls, Oyntments, Cerecloaths and Plaisters are used, and may very well serve instead of them all, it being a thing indeed of such necessary use on all occasions, that no Family ought to be without it.

XII. The way of using it. Anoint the place affected well, before some warm Embers, or a gentle Fire, and immediately lay over it a thick linner Cloth, or piece of sheeps Leather spread with the same, and straitway wrap up the part in warm wollen Cloaths; and repeat this Morning and Night.

all fuch time as the Patient is well.

XIII. In inveterate Scabs, malign Ulcers, Kings Evil-Sores, &c. you ought to take twice or thrice a Week our Family Pills, and to drefs the part twice a day as aforefaid. For the Pills by purging, divert the Humors which flow to those parts, and take away that matter which nourishes the Disease, thereby perfecting the Cure with much ease and speed, and for a small charge. Price one Shilling an annce.

## CHAP. XLII.

Baffamum Arthriticum nostrum. Our Gout Balfome.

I. T Ake oyl Olive four pounds: Venice Turpentine, Venice or Castile Soap, of each two pounds: Rosin, Bees-Wax, of each a pound and half: Saccharum Saturni, Camphir of each a pound: Thebian Opium (made into an extrast of the thickness of new Honey) three pounds: mix all together over a gentle Fire, and keep them stirring till they are melted; then boyl them to the consistency of a thick Balsam, or soft Emplaster. Note the Camphir mustifift be dissolved in Spirit.

II. This Ballome eafes all pains of the Gout and Sciatica, and Pains in any part of the Body: prevails against tartarous and hard Tumors, cools inflammations, abates Pains and Swellings in the Testicles, and alleviates the sharpness of Humors in an Erysi-

pilas.

III It is good against dolors and disaffections of the Sides, Liver and Spleen, stitches, swellings of the Spleen, pain and weakness of the Back. It is a rare thing also to asswage the pain of the Piles or Hemorrhoides, and to give ease to all manner of Pains, whereever it can be applyed, and this to admiration.

IV. You may fuccessfully apply it to the Forehead and Temples, to ease the Headach, and cause rest, it prevails against suffocations of the Mother, for which thing alone you ought to esteem it a Jewel.

V. And as it is wonderful in eafing and curing all pains of the Gout, Sciatica or Scurvy, or proceeding from what cause soever in any part; so it is a second

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Chap.42. Balfamum Arthriticum nost. 749

cret also in dissolving of arthritick Nodes, Tophs and Gums, the which are as in were miraculously dissipated by it. It may be applyed to the Shins, Knees, Arms, Back, between the Shoulders, & d. And for these purposes, I never found any thing more effectual.

VI. A certain person forty years of Age had a great and hard Tumor upon his Spleen, reaching almost cross, toward the rightside, with other evil symptoms of those parts; I applyed this Plaster or Balfam thereto, and in a few hours it gave him great ease; and by degrees (in length of time) softned it, dissipated or dissolved it, and perfectly took it away, but he also all along took inwardly our Volatile Landanum, a little Pill every Night.

VII. It is good against Bruises and Ruptures in Children, it wonderfully strengthens debilitated Members, asswages Inflammations, discusses, mollifies, digests, consolidates, stops distillations and affluxes of Rheum or other ill humors upon any part, and de-

fends from accidents.

VIII. It eases the griping of the Guts, and is a present Remedy in the Colick, Diarrhoea and other Distempers of the Bowels, heat, pain and inflammation of the Reins, &c. if the parts affected be first anointed therewith, and then applyed to the same,

spread upon Leather.

IX. It prevails against Cancers in Womens Breasts, easing the Pain, mollifying and discussing them; I have found a great success in it for this purpose; and I question whether there be a much better thing for this intention in the World: apply it to the Cancer upon Leather, and renew it every day.

Price one shilling an onuce.

# CHAP XLITE

Pilulæ Panchymagogæ nothes. Our Pills for the POX.

In T she Colognithe, restinger Seammany, of each one onnote: Elevering, Turbish Minarally of each one half an ounce: Onl of Caramans three deachane: volatile Sel Armoniach, or ember Sale of Huntaillow a drachmand an half: with a sufficient quantity of Sympus de Sping Carvina on Syrup of the with Cucumber, make a mass of Pills.

II. This is one of the most powerful Cacharticks in the World and an universal purger of all Humors, from all parts of the Body being good against tartarous Diseases, hypochondriack Melancholy, alienation of the Mind, Madnels, obstructions of the Liver, Spleen, Mesentery and Words.

III. In the Cachexy, Doopfie, Jaundice, Leprofie, Scabs, Tettars, Ring-Worms, an inveterace and rebellious Herpes, and fuch like stubborn Difeases.

it is a most supendious Remedy.

IV. It cares the Scurvy, though radicated in the Bones, purges and cleaneds the whole mals of Blood, removes all the Symptoms, in a very flort time, and renders the Patient stronger and sounder, than

in any of the former parts of his life.

V. They purge both thick and thin Humors, evacuate tartarous Matter, and evadicate even the Seeds of Discases; and mightily facilitate the cure of all forts of old Sores, running Fiscula's, inveterate and stubborn Ulcers, as the Wolf, Cancer, Phagedena, Herpes exedens, Noti me Tangere, and other like contumacious Distempers.

VI. They

Chap. 43. Pilulæ Panchymagogæ noft. 747

VI. They open all obstructions of the Womb, and cleanse it from all its Impurities, as Wind, Water, Whites, clotted Blood, &c., from whence ari-

fes a very great number of Diseases.

VII. These Pills are a good Purge for malign, putrid and poylonous Humors, and are very prevalent against Diseases of the Head., Stomach, Bowels and Joynts. They are singular a ainst the Headach, Vertigo, Megrim, Lethargy, Frenzy, Madness, against Venereal Pains and Breakings out. Botches Boils, Scales, Speciers, and the like.

gainft Venereal Pains and Breakings our. Borches Boils Scales, Surfairs, and the like.

VIII. They are powerful against Sciatica's. Gouss of all forts in Hands. Arms. Knees and Feet, Rheumarisms, and other like wandring Pains, of how long foever continuance, and whereloever icitiated in the

Body.

IX. They are a most excellent Remedy against the Kings-evil, taking it away root and branch: they cure it though ulcerated; taking off the Cacochymia, and carrying away the venene Matter to a miracle: But be sure to proportionate the Dose to the age of the person.

X. They are a most powerful Remedy, and a great Secret in the cure of Quartans, because they leave no impurity behind in the whole human Body, but destroy the very Essence and Seed of the

Disease.

XI. Lastly they cure a confirmed French Pox and virulent Gonerhea, in what Age, Sex, Degree or kind soever, if curable. They remove the Symptoms, and eradicate the root of the Venereal Venom, in a very short time: this they do without any thing of Fluxing, only by a gentle purging of the Body, and that most commonly at six or eight times,

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times taking; very few have been forced to take

them above ten times for a compleat Cure.

XII. The Dose and manner of taking. The Dose is from ten grains to a scruple or twenty five grains at most; if the Patient be vastly strong and robuflick, it may be you may venture to give half a drachm: but begin at first with a less Dose as a scruple, and so increase it by degrees, till it comes to half a drachm, you may give it in the pap of an Apple, stewed Prune, conserve of Roses, or a little Syrup, and that in the Morning fafting: and let the Sick have mutton Broth or poffet Drink to take after it by degrees, as it works: You may give it every fourth day, or twice a Week, as you fee the Sick is in strength. If the Disease be very rebellious, give twenty or twenty five grains of Calomelanes in Conferve of Rofes over Night, and then these Pills the next Morning, so will the cure of the POX come speedily on. Price eight Shillings an ounce.

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very that and this day downthauts of arrows only by a general arrong of the fact that commonly it his or eight

#### CHAP. XLIV.

Pilulæ Familias nostræ. Our Family-Pills.

Ake Extract of fine Alges, eight ounces: Resinous Scammony, four ounces : Refine of fallap, Extract of Colocynthis, of each two ownces and an half: Cambogia, Extractum Renedictum (made of Sena, Rhubarb, two parts, Agarick one part ) of each two ounces: Tartar vitriolate an ounce and an half: Elaterium, Extract of Saffron, Powder of Cloves, Mace, Nutmegs, Castoreum, of each one ounce: Calomelanos six ounces 3 or in stead thereof Arcanum Coralinum three ounces: all being in fine Powder (except the Extraots) mix them well together; and with Syrup de Spina Cervina, or Syrup of the juyce of the wild Cucumber a sufficient quantity, make a mass of Pills.

II. These Family-Pills are a certain cure for the Scurvy, Droppie and Gout. They cure the Scurvy, (the only reigning Disease in this Kingdom) when it is grown to bad, as to become scandalous, so as many people think it to be the POX. For the Scurvy often causes great Pains in the Head, Nose, Shoulders, Legs and Bones, with other Pains all over the whole Body; Dulness, Heaviness, with reddish or blewish Spots, or breakings out in the Skin, weakness in the Back and Loyns, a bad Stomach, and fometimes loss of Appetite, loosness and foreness of the Teeth, Throat and Mouth, a discoloured Skin, with Spots, Stains, Pimples, Morphew, Scurf and a general Weakness and Faintness all over the whole Body; infomuch at last, that it gets into the Bones, and infects the very Marrow of them: this cruel difease these Family Pills cure at a few times taking. III. They III. They wonderfully cure the Dropse and Gauss speedily taking away the Water in the one, and the Pain in the other, though never so great; and beyond expectation giving present ease, relief and comfort; working gently by Stool and Ulrine, and sometimes by Vomit, if the Stomach be very foul, thereby curing most cureable Diseases. By these Family Pills, we have cured hundreds of persons, both of Dropses and Gauss, and that in a very short time, some of which have been given over as uncurable; others have gone above a dozen years upon Crutches, and never heard to this day, that they ever mist the cure of one person, although I have used them near this twenty years.

IV. They are admirable good against Confimptions; not so much from their adding of Matter, as by taking away the obstructions which hinder the Nourishment from going to its respective parts: in which Disease, as also in the KINGS-EVIL, whether in old or young, they have scarcely been

known to fail.

V. These Fumily-Pitts are an excellent Head-purge, for all Diseases therein, as Headach, Megrim, Varigo or Giddiness, Lethargy, Frenzy, Madrass, Melancholy, dimness of Sight, kheums in the Eyes, &c. beyond

any Medicine ever yet known.

VI. They are an excellent help against Risings, Vapours, Cloggings, Stuffings, Gnawings, or illness at Stomach, for such as grow too Fat, Sweat or Spit much, have costive or hot Bodies, and for all such as have lost their Complexions by the Scarvy, Jaundice or Greensickness, such as are overtaken with lingring Diseases; growing worse and worse every year than other, with stoppages in the Head and Breast, Melancholy, shortness of Breath and itt Digestion, till such time as they fall into

Droppes, the faundice, hothick Feores or deep Confumprions, lingring and walting away with dry Comphr. Wheezings, faint Sweats, and the like. These our Family-Pills carry off all those Diseases the right way by taking them twice or thrice a Month.

VII. They purge by Stool, Flegin, Choler and Me-Innehely. They dispote old Oleers, Fiftula's, running Sores, fore Breufts, fore Byes, fould Hends, Kings-Evilfores, Wounds, Gungreens, Cancers, Testers, Ringworms, Scabs, falt humors, or any other breakings out, as Pulber. Boyls, Wheats, to a speedy healing, by purging away

the evil Humors which feed them.

VIII. These Family Pills are of excellent use for all Tavellers, Seamen and fuch like persons, who live on bad Dies, in ill Airs and moift Places, and near the Sea Coalt and for all fuch as have spoiled their Bodies, by Heats and Colds, hard or exceffine dringings in their young days, and fuch as cannot attend on a cure. but are forced to go about their buliness. may take them to Sea with them, because they keep their vertues many years, nor doe Sea-voyages fooil them: the which will be found to frand them in great stead in all Sea-Sicknoffes, fickly Scafons, Calentures, Fevers, Fluxes, Poylons, Agnes, Sentwies, Poxes, Surfeits, &c. which commonly affect fuch as go to Sea; so that more can scarcely be done by a purging Medicine.

IX. These Pills are an incomparable Remedy against the French Scurvy, all Diseases Venereal, the Gongrrhea, heat, pain and sharpness of Urine, although of many years standing, all Botches and Breakings out of the Flesh and Skin, Ulcers and stoppages of the Reins, Bladder, Womb and Privy Parts; performing every thing of this kind, with great speed, ease tafety and security; so that none living can take notice thereof.

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X. They are an excellent remedy against all manner of Coughs, Golds, Rhemist or Distillations, Stormels of Breath, Stimbing Breath, Vamiting, meakings of the Stomach, want of Appetite, Pleurises, paint of the Side, spitting of Blood; suddenly and strangely easing of Pains, proceeding from Wind, Colds, Surfeits, or any other cause whatsoever,

XI. They care France and Agues of all forts, formetimes in three Weeks, formetimes in fourteen Days, and formetimes in lefs time, although of two or three Years standing, and given over by all Physicians, and when almost every one thought the

hope of recovery had been paft.

XII. They kill all forts of worms, in old and young; cause a good Appetite and a strong digestion. They are one of the best Remedies in the World against the Dropsie and Gom; taking away all Swellings from the Belly, Thighs and Legs; and all manner of Pains from the very Bones, when no other means whatsoever will do. They dissolve the Stone, and bring away Slime, Sand and Gravel from the Reins and Bladder; taking away stoppages of Urine, and causing those to make Water plentifully, who could not in some days before; this they have done in several hundreds to admiration.

XIII. They are a certain cure for the Fallinglicknels, Convulsions, Apoplexy, Palsie, Cramp, Lamenels,
weaknels of Limbs, faundice, Sciatica, and all manner of
running Pains whatsoever in any part; insomuch that
many bedrid, and given over to all appearance, have
unexpectedly met with cure, almost to a miracle;
so that many learned Physicians could not but admire

at their vertues.

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XIV. These Family Pills cure Barrenness, bring down the Terms, strengthen a weak Back, help sits of the Mother, and other diseases belonging to that Sex: they expel Wind, are admirable against the Colick, and speedily care the griping of the Guts; so that many seemingly at the point of death, have mer with a pleasant remedy.

XV. These Pills are a powerful remedy against the Rickets in Children, the Green-sickness in Virgins, all manner of stoppages in the Head, Liver, Spleen, Reins, Womb, and pains in the Bowels. They purify, cleanse, and smeeten the Blood, restify all distemption of the Head, quicken the Senses, clear the sight, add a good colour to the Face, and make the body able to withstand dis-

eases.

XVI. These Family Pills are the chief medicine now used in the cure of all the aforesaid diseases. not only in England, but in many foreign Countries and Kingdoms, being cried up, and prized above all other Medicines whatfoever , in fo much that in fome thousands of Families on most occasions they are their only Phylick, (and from whence they came to be called Family Pills ) being known to be fafe in operation. and certain in the end proposed; for no person curable, troubled with any of the aforesaid diseases, has failed of cure, who has continued (without delay of time, or taking of other Phylick) the use of these Pills, according to the directions following. All that ever we knew take thefe Pills, have found good at the first taking, and several hundreds year thousands of People who have taken them have given them this commendation.

XVII. They cleanse the body of Wind, Water and ill hamours, without the least griping or making Sick (unless the stomach be very foul) or any way weak-

ning the body; which done they cease working, for they will work no longer than there is diseasy marter to work on But contrariwise, help all immed massings as decays of Nature, strongthen meal Backs, caused through pains, intractives, or over freelings; they for all meepings, maisture, whites, occ. (by carrying the limitous another way, strengthning the Vessels, fortifying Nature, &c.) restoring the decayed parts even to a wonder.

KVIII. Our fuccess in the use of them, and their safery, has brought them into estimation, in many parts of the World: for as much as they that take diese Pills, need not go under long, dangerous and chargeable courses of Physick, suffer by bad medicines, and be driven

time after time, from one Physician to another.

IX. When the disease is of long continuance, a perfect cure cannot be expected in a few times taking in those cases, you may take them in the larged dose, at least ten, fifteen times, or more, as need requires, omiting them a day or two, or more, as you see cause: they being safe and gentle in their operation, and fit to be taken by all persons from two years old to threescore, and upwards, at any season of the year. And it is observable that these Pills, after four or five times taking, keep the Bowels open for a month together, whereby diseases seemed melt away, almost insensibly.

X. This medicine is of an admirable and friendly Quality, performing all its operations, as nature her felf requires, they sometimes purpe gently, sometimes was gently by vomit, and sometimes by Urine, and sometime by all those ways, according as nature her felf is disposed to the action, though chiefly by stool, so that they are me bound to any particular way of Operation, but that which may best serve natures end in restoring health.

Hence

Hence it is, that they not only cure diseases of the humours, as the Scarry, Gont, Surfeits, ease all manner of pains, &c. but they rectifie distempers of the Spirits, taking away heaviness, dalness, melancholy and the like, performing all their operations with great safety, speed and ease, being fitted for all persons of what Age, Sex, or Constitution, so ever. If there be but little corruption in the body, they bring forth but little; if much, they bring forth much; and in persons perfectly well they will scarcely work at all, because in such they have no enemy to meet with.

XXI. There Pills are cheap, fare, easy, approved helps, and free from the least danger, yet very effectual to all the afforciment oned intentions, performing what is here fooken of without hazard of body, money, or expectation, as some thousands in this kingdom, can upon their own knowledge restricts they will keep many years good, and work all their good effects, as well after a length of time as now.

XXII. The way of using them. These Pills may either be swallowed down alone, or taken in the pap of an apple, or Home, or a stewed Prime, or in a little Syrup, or brussed and taken in a little Beer, Ale, Wine, or Brush, as everyone likes best, and so taken early in the morning, or late at night going to bed, without observation of any other Order, only taking heed of Cold. From two years old to three or four you may give two or three pills: from son years old to three or four you may give two or three pills: from ten years to savien, you may give three or four pills: and from sixteen jents of Age to threescore and upwards, you may safely two sives for pills: you may begin with a little dose suff; and so encrease it, at you find the body is in strength. They are to be had in most market Towns in Englands free twenty sence a Box, or sive shillings an owneer

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Hence ic is, that they not only cure chicales of the linthours, as the Sourcy, Gore, Subbles, who all memer is polytic, but they research differences of the Spirits is.

# CHAP. XLV

Balsamum de Chili, Or, Natural Balsam of Chili.

I. There is lately brought from Chili, a Province in America, a most excellent Natural Balsam, differing (but not much) from those of Peru and Tola, but no ways inferiour in Vertues and excellency, as the several experiments lately made of it, by several learned Physicians, in the curing of diseases, has given evident demonstration.

II. It is a remedy that no man under the Sun can compose, being a natural Balsam, distilling from a small Tree in Chili, bearing a leaf something differing from an Olive leaf. It is without doubt the most precious of all Natural Balsams, by reason of its great Vertues, and admirable odour, excelling all

others, even the most fragrant.

III. It eases all manner of pains in any part of the body, coming of cold or Wind, chiefly pains of the Stomach, Indigestion, and want of Appetite, corroborating, and strengthning of it, after a wonderful manner. It cures all Ulcers of the Breast and Lungs, Reins, Bladder, or Womb, inward Bruses spittings of Blood and such like. It helps shortness of Breath, Coughs, Consumptions, Wheelings, Hoarsness,

Hoarfirefs, Afthra's, and other difeases of those parts.

IV. It is excellent against the Falling-sickness, Apoplexy, Convulsions, Palsie, Lethargy, Tremblings, old Head-achs, Megrims, Vertigo's, and other cold and moist diseases of the Brain and Nerves, being inwardly taken, as shall be hereaster directed; and outwardly also anointed upon the Part. It strengthens the Brain, comforts the memory, and fortifies all the senses both internal and external, beyond any other natural Balsam.

V. It kills worms whether in old or young, cures Ruptures, although of many years standing, and disfolves the Stone and expels it, as also Sand, Gravel or Slime, or any other thing which may obstruct the Urine, or stop up its Passages: so that its believed there is scarcely a better remedy for that purpose upon Earth; for it gives ease in the most vehement, pain, and being constantly taken for some time, per-

fects the cure.

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VI It cures all Colick pains, Gripings, wind in the flomach or Bowels, and perfectly cures all forts of Fluxes, bloody Fluxes, excoriations, and fuch official like differences of the Guts. It cures Deafnels, pain and noise in the Ears to a wonder, a drop or two, being put into the Orifice of the Ear, and kept in with a little Cotton dipt in the fame.

VII. It cures the Green-fickness in Virgins, and provokes the Terms in Women, being taken from ten to ewenty, thirty, or forty drops, in a glass of white Wine; (as shall be anon directed) morning and night for a week together. It cures also Barrenness, promotes conception, and causes easy and speedy deliverance to Women in Travel(for all which purposes it is said the Indian Woman constantly takes it:) and in a great C c c 3 measure

measure it prevents or takes away those After paies, being taken to the quantity aforenamed in a glass of

Juniper or Cinnamon-water.

VIII. It heals all manner of Green, wounds, rotten blicers. Futula's, new or old running fores; in any part of the body; as also Punctures or hurse of the Nerves and Tendons, Aches, pains, Lamenels, weakness of the Limbs or Joynts, being dropt into the Wound or Puncture, or otherwise applyed thereupon, with a Tent, Lint, or Leather, the and to bound up, and not stirred in twenty four hours. It commonly cures at four or five usnes dretting; sometimes at two or three times, and sometimes at the first dretting, though the wound be very deep, contuined or large. This I speak upon my own experience.

IX. It is an affured remedy in the cure of the Pally (if not inveterate) trembling, Gours of all forts, and any weakness of the Nerves and Joynts, coming of a cold and moilt cause, by anounting the afflicted parts therewith, and taking it inwardly, as shall be immediately directed; for it does greatly, and by degrees (as it were) carry of the morbifick cause and matter, almost beyond be-

lief.

K. This marvelous Balfam, opens all obstructions of the Liver and Spleen, being taken morning and evening for a month together in a little Syrap, or other convenient Vehicle (as shall be presently directed.) It is held by the Matives for a great Treature, and has many other singular Virtues, not here necessary to be named, lest we should prejudice its worth and excellency.

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XI. And as it is certain, that this Ballom is one of the greatest Specificks in the cure of the Pally, Source, and Gout that is; so it transcends most other medicaments for those purposes. But it ought to be constantly given, and in a due dose, and with those advantages that it may not nauseate the stomach. So taken, it performs more than any other natural Ballans it cleanses the whole body of all impurities; mundifies the whole Mass of Blood, heals all inward bruises. Wounds, Ulcers, or Excortations, whether in the Bowels or Lungs; and restores decayed names to a Miracle, carrying off all its Foeculencies by Ulrine and Stool.

XII. The Dole and manner of taking it. In difeases of the Head, Brain, and Nerves, give it in Rosemary or Cinnamon Water, or in Canary. For the Stone, and other diseases of the Reins and Bladder, you may give it in White or Rhenish Wine. For the Colick, and diseases of the Bowels, you may give it in Juniper mater. For Palsies, Gouts and weakness of the Nerves and Joynts, you may give it in some Antiparalytick Wine. If the Sick cannot take it in any proper Wine or Water, it may be mixt with any proper Syrup, and so swallowed, drinking a glass of the said Waters or Wine after it.

XIII. If it cannot be so taken, it may be made up into a Bolus with some Conserve or Electuary; or into Pills with some fit powder, as of Bay-berries, Cinnamon, Cubebs, Nutmegs, Zetary, or what the Physician shall think more proper, and so gilded: for by this means it will be taken without nauseating. You may

give it from half a dram to two drams, yea to three drams, according to age and strength, but then you ought to encrease the dose by degrees; and it may be given morning and night for a month, or two or three, as you shall fee occasion, and that without any prejudice.

The Merchant that has brought it over, has only intrusted it to be fold with Mr. Thomas Passenger, at the three Bibles on London-Bridge, where it may always be had in any quantity, ready put up in Glasses, scaled with the Balsam Tree. Price twenty sour

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#### CHAP. XLVL

De Vehiculis: Of Vehicles for conveying the foregoing Medicaments into the Body.

I. V Ehicles for the conveying of Medicaments down the Throat into the Body, are either Natural, and always ready at hand; or Artificial, and to be prepared for fuch like occasions: and each of

these are again either Liquid or more Solid.

II. Those which are Liquid and always ready at hand are 1. Fair Water. 2. Beer or Ale, 3. Metheglin. 4. Wines, as French, Rhenish, Mallago, Sherry, Canary. The more folid Vehicles are 1. The yolk of an Egg. 2. Honey. 3. Pulp of an Apple. 4. Pulp of Prunes. Where note, that when fair Water is used for a Vehicle, it may be sweetned with fine Sugar, if the sick so pleases.

III. The Liquid Artificial Vehicles are 1. Hippocrat. 2. Syrupus Sacchari. 3. Syrupus Volatilis. 4. Syrup of Limons or Vinegar. 5. Cimamon Water. The more folid Vehicles are 1. Saccharum Tabulatum, 2. Conferve of Barberries. 3. Sapa simplex. 4. Diacy-

donium. 5. Diamorum.

IV. To make the Hippocras aforenamed. Take choice Canary, white Wine, of each fix pints: Cinnamon two ounces: Cloves, Mace, Numers, Ginger, Galangal, of each a drachm: fine Sugar, forty ounces: digeft close stopt for two or three days: then decant the clear, and bottle it up.

762

V. Syrupus Sacchari. Take Damask rose water, or Spring water a Gallon: fine Sugar fixteen pounds: mix, and make a Syrup by melting the Sugar : to which add spirit of Wine a quart, shake them well together in a glass, and keep the mixture for nfe.

Lib. VII

VI. Sympus Volatilis. Take the best rectified spirit of Wine a gallone white Sugar as much as the Spirit will dissolve over a gentle heat: being mixt and dissolved keep the Syrup for use.

VIL Swup of Limons or Vinoper. Take the best white-Wine-Vinegar, or juyce of Limons a gallon: double refined Sugar fixteen pounds; mix, melt and

make a Syrup by a gentle ebullition.

VIII. Cinnamon Water. Take Spirit of Wine three pints: Cingamon bruiled, four ounces: infule them together for a week in a large Glass closes stope, shaking the Glass twice a day; then take Damask Rose Water a quart; dissolve therein white Sugar-Candy half a pound: mix both these liquors together; and hang therein Musk, eight or ten grains (in fine powder, and tyed up in a Rag).

IK. Saccharum Tabulaum. Take Damask Rofe-Water, or Spring Water, two quarts - pure fine Sugar eight pounds; boyl them together to double the

thickness of a Syrup.

X. Conferve or Rob of Barberries. Take juyce of Barberries strained six pounds: white Sugar three pounds: with a gentle heat (if it may be of a B. M)

boyl to the just thickness.

XI. Sapa (implex. Take Wine newly preffed from white and ripe Grapes; boyl it to long over the Fire till two third parts are confumed, or till it is as thick as Honey, and then keep it for use. Where note, That if you add a fixth part of white Sugar,

Sugar, the Sapa will be never the worfe.

XII. Diacydonium. Take juyce of Quinces depurated fix quarts; boyl it to the confumption of four quarts: then add a pound of fine white Sugar, and by repeating the boyling, make Quiddony, which keep close tyed over for use.

XIII. Diamorum. Take juyce of Mulberries twelve quarts: fine white Sugar three pounds: or instead thereof as much Honey: clarifie the juyce, and boyl to a Rob or Quiddony: which keep in a Gally pot close tyed over with Parchment or a Blad-

der, for ufe.

XIV. Lastly, in the use of these things observe, 1. That you give all Medicaments of an Alcalious Nature in a sweet Vehicle, not in a tart or sowre. 2. That no acid Vehicle be made use of in the exhibition of Mercurials, lest you provoke the Dragon to an unusual violence. 3. That Opiates may be promisenously given in either.

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# ADVERTISEMENT.

De Velriculis.

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In these Medicines we here offer our help; they being wholly salubrious and beneficial to the Body, of a small Price, and admirable against the Diseases specified; These Medicaments may be of excellent use for all Travellers, Souldiers, Seamen, and such like, who cannot attend upon a Cure, but

are forced to go about their business.

They may take these things to Sea with them, where they will stand them in great stead, in all Sea-suknesses, sickly Seasons, Agues, Scurvies, Poxes, Gouts, Poysons, Fluxes, Feavers, Calentures and other Diseases commonly attending Armies, Camps, and such as go to Sea. I verily believe I have performed more Cures with them, than any other Physician in England, by the use of other things, especially in Scurvies, Dropsies, Gouts, Agues, Worms, Fluxes, Feavers, &c.

And although we have already given you the *Prizes* of each Medicine in particular, as we feverally treated of them; yet for your farther ease, that you might see them all at one view, we have taken the pains to collect the same together, in the following Catalogue, being the value of each Medicine by the ounce.

Lastly, These Medicaments are all firm and durable, so that neither the Sea, Sea-son of the Year, nor Age, will spoil them, if they be kept close; and they may be all had, (excepting the two last) faithfully prepared by the Author, at his House at the Blew Balcony by the Ditch-side near Holborn-

no Timberta Maries .NOD

Bridge, LONDON.

La Spiritus Andrigues

23 Spiritus Aperiess

24 Spiritus Astisfilmicinus

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27 Poseftates Biccorna Juniferi

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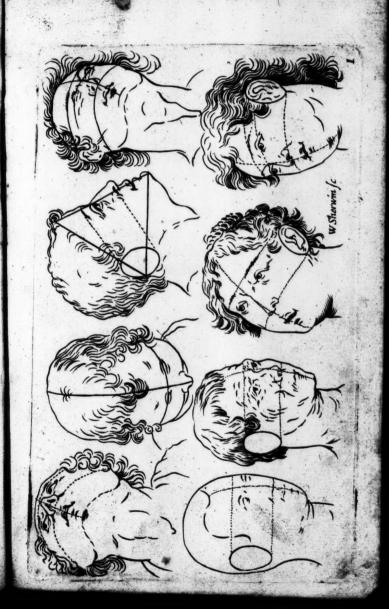
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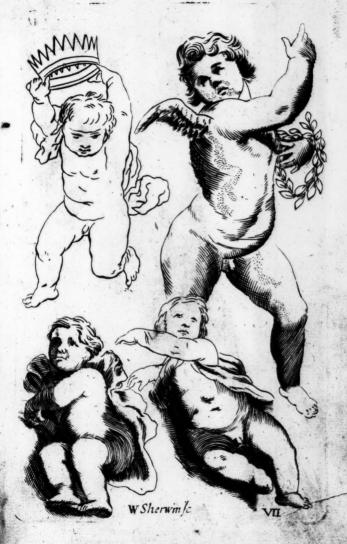




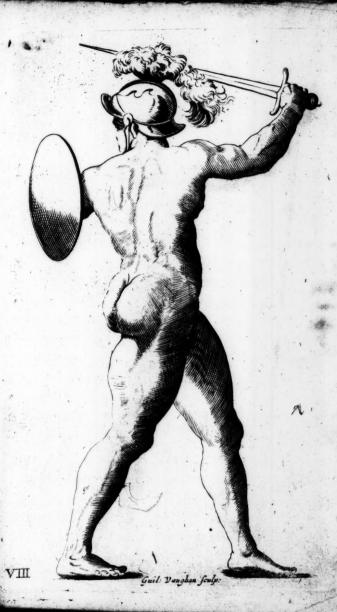












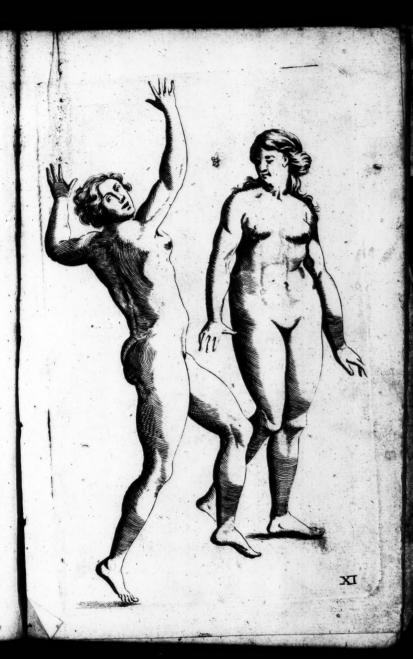






















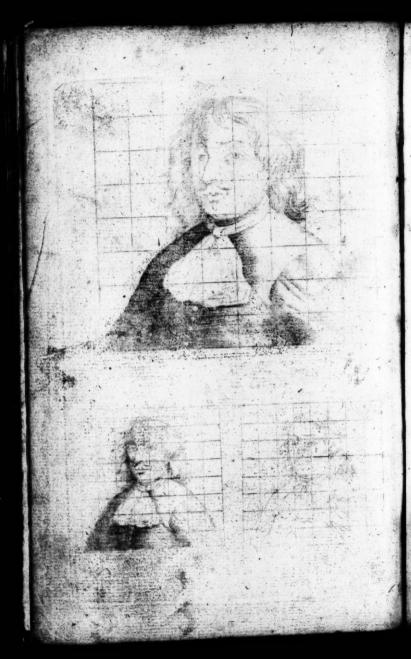


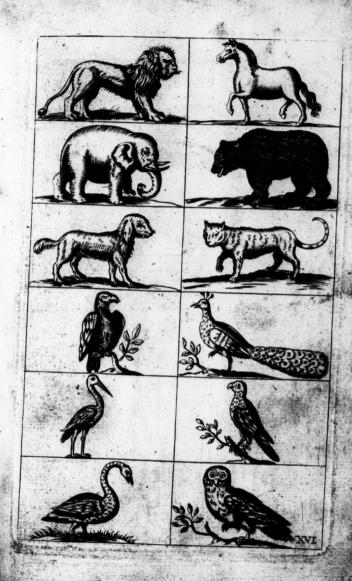




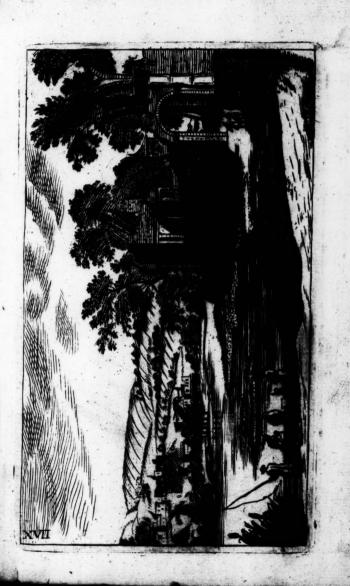




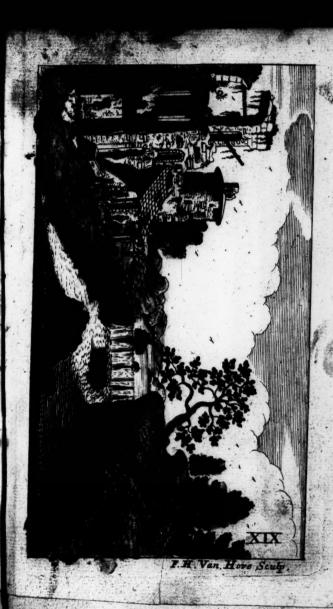














F. H. Van Hove Sculp.



F. H. Van Hove Sculp.





Qui in manu omnium hominum figna posi: it vt cognoscerent opera ente singuli:



